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ABSTRACT

This document is a comprehensive directory of Federal offices, programs and facilities for K-12 education in mathematics and science for the Pacific Region. The purpose of this directory is to assist educators, parents, and students in attaining the National Education Goals, particularly Goal 4: "By the year 2000, U.S. students will be first in the world in science and mathematics achievement." The guidebook describes programs, along with contact information, that assist students who will go on to study in college or technical school, as well as programs to improve general mathematical and scientific literacy. The directory is divided into three sections. Section One: Agency Overviews contains general information about each of the 16 federal agencies that collaborated with the Eisenhower National Clearinghouse to produce this publication. Each agency highlights its involvement in mathematics and science education and acquaints the reader with agency-specific background information. Each agency also lists its administrative offices for mathematics and science education to give readers a source for additional information on its organization and operation. Section Two: National Programs for Elementary and Secondary Education features nationwide agency-sponsored mathematics and science programs. Each program entry includes the program name, a brief program description, and contact information. Section Three: Regional Highlights lists, within state groupings, agency resources that are available in the Pacific Region, which includes American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Hawaii, Republic of the Marshall

Islands, and Republic of Palau. The document concludes with an index of teacher programs; student programs; comprehensive programs; evaluation, dissemination, and technical assistance programs; and educational technology programs. (MKR)

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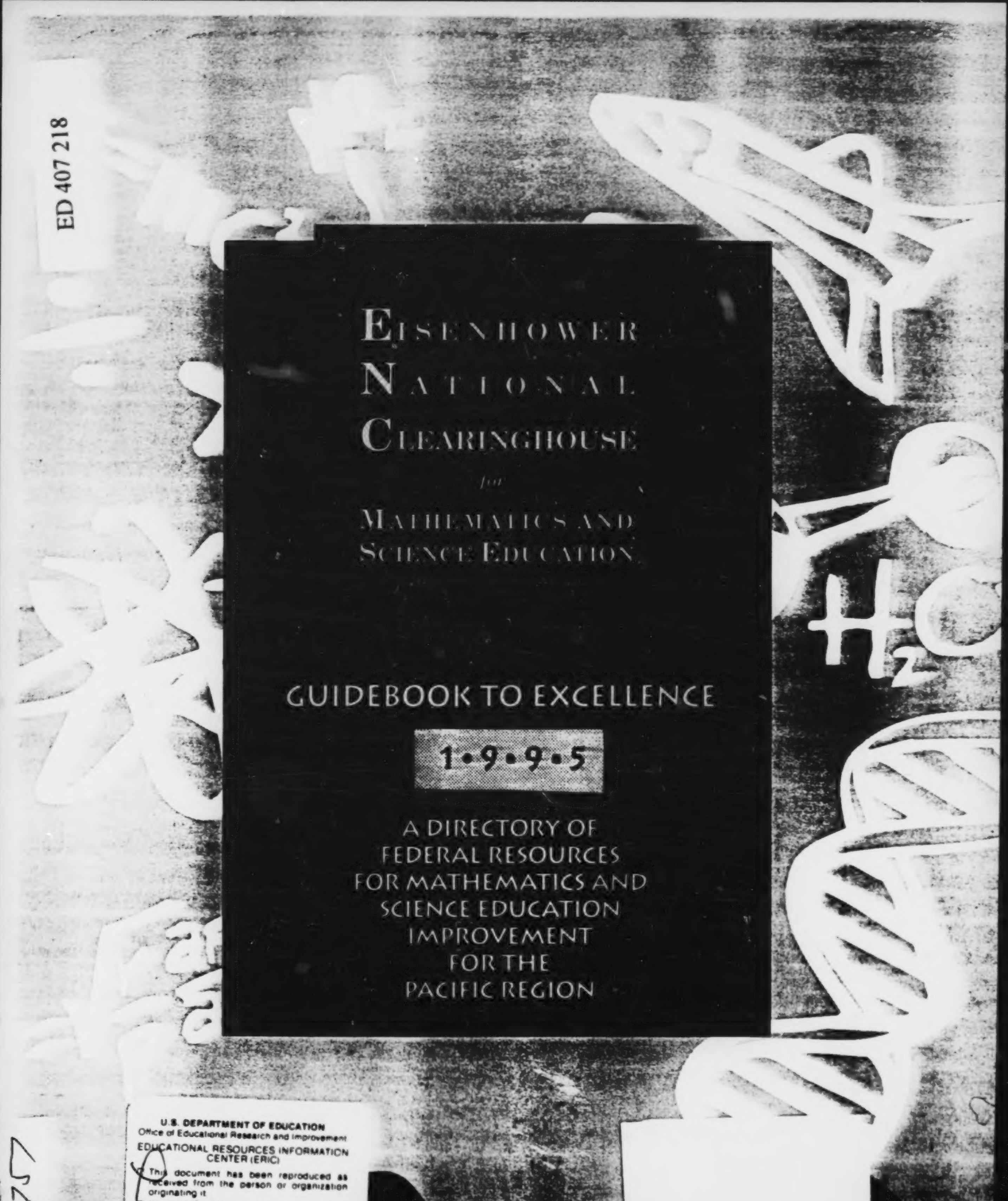

EISENHOWER NATIONAL CLEARINGHOUSE for MATHEMATICS AND SCIENCE EDUCATION

GUIDEBOOK TO EXCELLENCE

1•9•9•5

A DIRECTORY OF
FEDERAL RESOURCES
FOR MATHEMATICS AND
SCIENCE EDUCATION
IMPROVEMENT
FOR THE
PACIFIC REGION

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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The Guidebook to Excellence was produced by the Eisenhower National Clearinghouse for Mathematics and Science Education (ENC) for the Eisenhower Regional Consortia. Comments or corrections should be forwarded to ENC.

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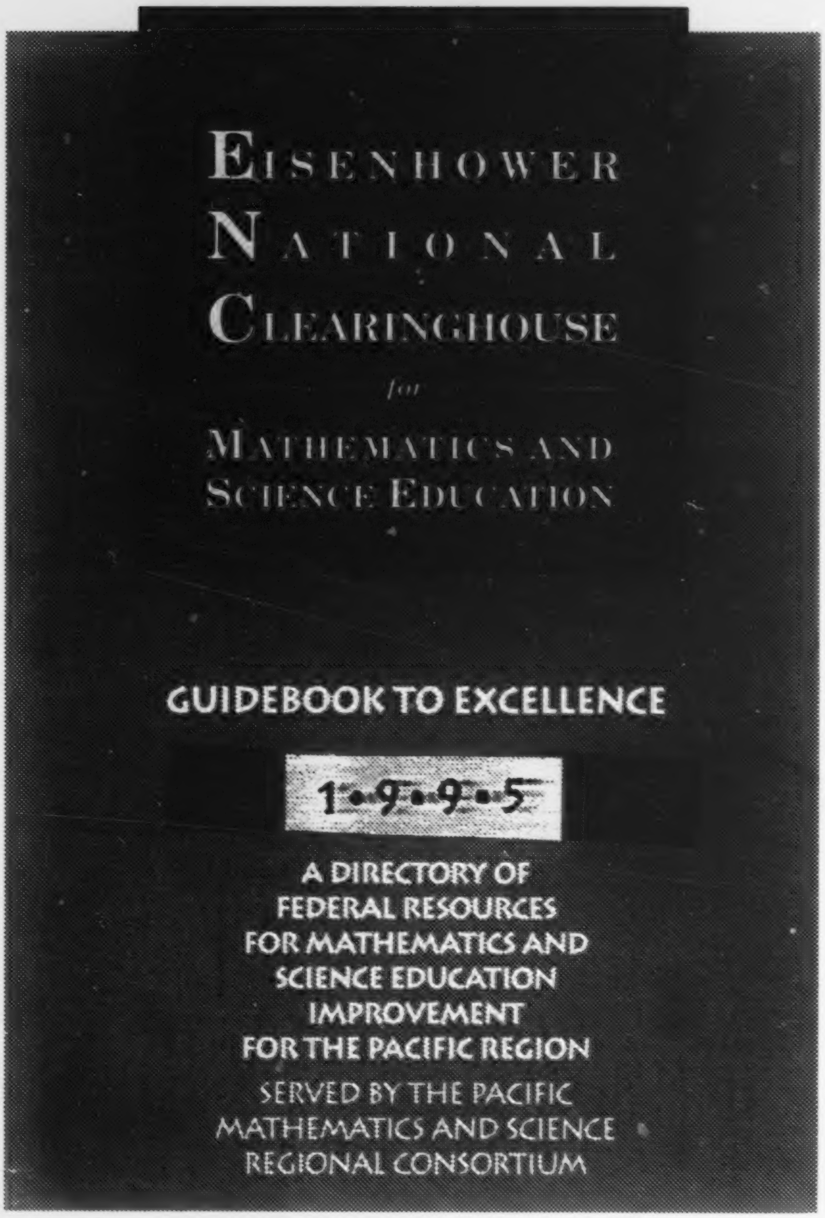

EISENHOWER NATIONAL CLEARINGHOUSE

for

MATHEMATICS AND SCIENCE EDUCATION

GUIDEBOOK TO EXCELLENCE

1•9•9•5

A DIRECTORY OF
FEDERAL RESOURCES
FOR MATHEMATICS AND
SCIENCE EDUCATION
IMPROVEMENT
FOR THE PACIFIC REGION

SERVED BY THE PACIFIC
MATHEMATICS AND SCIENCE
REGIONAL CONSORTIUM

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UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF THE ASSISTANT SECRETARY
FOR EDUCATIONAL RESEARCH AND IMPROVEMENT

September 12, 1994

Dear Reader:

The Guidebook to Excellence is a comprehensive directory of Federal offices, programs and facilities supporting K-12 education in mathematics and science. It is intended to inform educators and the public about Federally-supported resources in these subjects and to increase access to them. This publication contains information about Federal offices and programs at the national and regional levels, and also lists state-by-state contacts for many of these resources in your region.

This regional Guidebook to Excellence has been prepared by the Eisenhower National Clearinghouse for Mathematics and Science Education, in cooperation with the Committee on Education and Training (CET) of the National Science and Technology Council (NSTC). CET represents 16 Federal agencies. These agencies are working together to increase the effectiveness of their collective activities in mathematics, science, engineering, and technology education and training.

This is the second edition of the Guidebook to Excellence. It updates information contained in the first edition, which was published early in 1994. We plan to have the Guidebook to Excellence updated for publication in each school year, and are pleased to have this 1995 edition available for use early in school year 1994-95.

The Eisenhower Regional Consortia for Mathematics and Science Education are helping to distribute the Guidebook to Excellence in their regions. The Regional Consortia provide technical assistance and disseminate information in order to improve mathematics and science education. We hope that the Eisenhower National Clearinghouse and Regional Consortia, working together, will be a significant force for reaching National Education Goal Four, that American students will be first in the world in mathematics and science achievement by the year 2000.

We believe that you will find the Guidebook to Excellence to be a valuable tool as you seek ways to enrich and improve students' learning and performance in mathematics and science.

Sincerely yours,

Eve M. Bither
Acting Director
Office of Reform Assistance
and Dissemination

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FOREWORD

The Eisenhower National Clearinghouse for Mathematics and Science Education has been pleased to work with the National Science and Technology Council (NSTC) and the Eisenhower Regional Consortia to publish the regional *Guidebooks to Excellence*. Each regional publication is a subset of the national *Guidebook to Excellence*, compiled and published jointly by NSTC and the Eisenhower National Clearinghouse, and they are part of the continuing effort by the organizations to identify and disseminate resources that strengthen mathematics and science education in the United States. The publications identify, by region, mathematics and science education facilities and contacts for programs administered by each Federal agency or department. The Eisenhower National Clearinghouse and NSTC committee members have worked closely with representatives from many Federal agencies to compile the information in this publication.

The Eisenhower National Clearinghouse is funded through the U.S. Department of Education to provide K–12 teachers with a central source of information on mathematics and science curriculum materials. The purpose of the Eisenhower National Clearinghouse is to encourage the adoption and use of K–12 curriculum materials and programs that support national goals to improve teaching and learning in mathematics and science. The Clearinghouse will accomplish this task by creating and maintaining a comprehensive, multimedia collection of materials and programs that will be distributed using both traditional formats and advanced computing and telecommunications technologies.

In addition to publishing this *Guidebook* in print, the data is available electronically. The Federal programs database is accessible online via the Internet and through the Eisenhower National Clearinghouse toll-free number, 800–362–4448. The database is also accessible through many of the Eisenhower Regional Consortia. The provision of electronic access is part of the larger Eisenhower National Clearinghouse effort to increase the scope of resources available electronically to educators and to encourage the use of technology in the classroom. While we want to stimulate the use of technology, we recognize that many education professionals do not have access to computers, modems, or network connections at this time, and we will continue to provide *Guidebooks* in print form.

The Eisenhower National Clearinghouse works closely with the Eisenhower Regional Consortia in the national effort to support systemic improvement of mathematics and science education. The Regional Consortia and the Clearinghouse collaborate on identifying and distributing mathematics and science curriculum materials and on identifying products and services that support technical assistance for teachers and other education professionals. The *Guidebooks* and electronic database are important products of that collaborative effort.

Enormous effort has gone into the preparation of the regional *Guidebooks to Excellence*. NSTC committee members and representatives of Federal agencies who provided the basic information for the document spent many hours working with the Eisenhower Clearinghouse subcontractor staff at Aspen Systems Corporation. I speak for the Regional Consortia and the Clearinghouse when I applaud their effort and their dedication in producing this publication and the electronic database.

All three organizations, the Eisenhower National Clearinghouse, the Eisenhower Regional Consortia, and NSTC, are supporting the effort to achieve National Education Goal 4, "By the year 2000, U.S. students will be first in the world in science and mathematics achievement." We hope that the publication of this *Guidebook* will contribute to reaching this goal.

Dr. Len Simutis, Director
Eisenhower National Clearinghouse

HOW TO USE THIS DIRECTORY

GUIDEBOOK TO EXCELLENCE

A DIRECTORY OF FEDERAL RESOURCES FOR MATHEMATICS AND SCIENCE EDUCATION IMPROVEMENT

The purpose of this *Guidebook to Excellence* is to assist educators, parents, and students across the country in attaining the National Education Goals, particularly Goal 4: *By the year 2000, U.S. students will be first in the world in science and mathematics achievement.*

The *Guidebook* will help make the education community aware of the Federal Government's extensive commitment to mathematics and science education. Sixteen Federal agencies collaborated with the Eisenhower National Clearinghouse to produce this publication. Although the *Guidebook* contains valuable information for anyone involved in mathematics and science education, its focus is on the elementary and secondary levels.

The *Guidebook* consists of three sections:

Section One: Agency Overviews

Section One contains general information about each of the 16 agencies. Listed alphabetically, each agency highlights its involvement in mathematics and science education, and acquaints the reader with agency-specific background information. Each agency also lists its administrative offices for mathematics and science education—to give readers a source for additional information on its organization and operation. For detailed information on agency-specific programs and facilities, readers may refer to Sections Two and Three of this *Guidebook*.

Section Two: National Programs for Elementary and Secondary Education

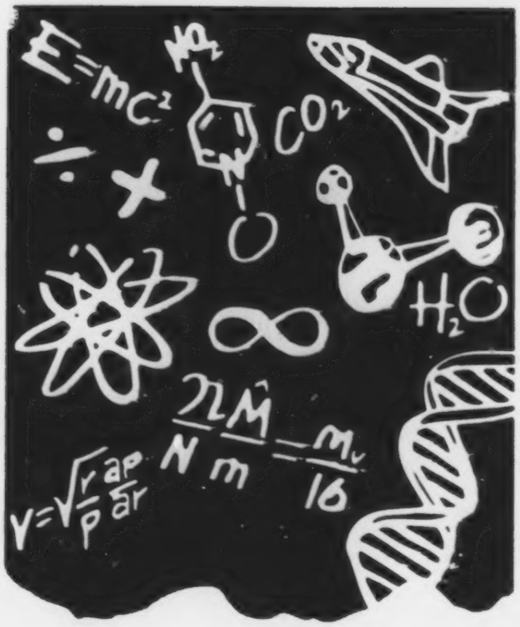
Section Two features nationwide agency-sponsored mathematics and science programs for elementary and secondary education. Again listed alphabetically by agency, each program entry includes the program name, a brief program description, and contact information. Readers searching for a particular type of program may refer to the Index on pp. I–1 to I–4 of this publication, which lists all national programs alphabetically within each program category.

Section Three: Regional Highlights

Section Three lists within State groupings agency resources that are available, or accessible, at the local level. The section begins with a description of the Eisenhower Regional Consortium. By referring to the State-by-State listing of facilities and contacts for mathematics and science education, readers can easily discover what resources are available within their own States or jurisdictions. As numerous resources are available to anyone who can travel to a facility or location, readers should also examine programs listed for neighboring States or for States they are planning to visit.

A comprehensive mathematics and science education resource directory for K–12 programs, the *Guidebook* describes programs that assist students who will go on to study in college or technical school, as well as programs to improve general mathematics and science literacy. Although the *Guidebook* does not list all federally funded education programs, it does provide contacts that can supply additional information. Recognizing that efficient use of time and resources is critical to meeting the National Education Goals, agencies have included a description within each of their entries to help readers determine which programs and contacts may prove most valuable.

The *Guidebook's* contents are available online through the Eisenhower National Clearinghouse. The *Guidebook* will be successful to the extent that it helps the education community locate Federal resources to support their efforts to improve mathematics and science education.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CO_2
H_2O
∞

SECTION ONE

AGENCY OVERVIEWS

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U.S. DEPARTMENT OF AGRICULTURE

Countries that possess and use scientific and technical skills in the food and agricultural sector stand the best chance of being competitive in world markets. USDA recognizes this and is committed to assuring the Nation of an outstanding cadre of agriscience and business professionals steeped in science and mathematics.

Mike Espy, Secretary
U.S. Department of Agriculture

MISSION

The U.S. Department of Agriculture (USDA) is authorized to provide the leadership, oversight, and management necessary to ensure that the United States has adequate supplies of high-quality food and fiber. The Department supports and conducts a wide range of research, development, extension, and education activities to achieve that mission.

BACKGROUND

On May 15, 1862, President Abraham Lincoln signed the act creating the U.S. Department of Agriculture. The Department has since helped to make American agriculture the most productive in the world, giving the American people the most varied and wholesome food supply for the smallest share of disposable income of any people in the world. On July 2, 1862, President Lincoln signed the Morrill Land-Grant College Act, which established colleges in each State to educate young men and women in agriculture, bringing higher education within reach of youth of ordinary means and elevating what had been called "agricultural training" to a scientific enterprise. In 1890 an additional group of 17 Historically Black Colleges and Universities was given land-grant status to enable the Department to serve all populations. The Food and Agriculture Act of 1977 designated USDA as the lead Federal Agency for higher education in the food and agricultural sciences.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

USDA's education efforts have helped produce scientific and nonscientific professionals who have made American agriculture the most effective and efficient agricultural system in the world. Through the Cooperative Extension Service and other producer outreach programs, the Department has effected the transfer of new technologies and scientific knowledge created by USDA research agencies, such as the Cooperative State Research Service, the Agricultural Research Service, and the Forest Service. USDA is also home to the National Agricultural Library, the largest agricultural library in the world. Other USDA agencies with research and education programs include the Agricultural Cooperative Service, the Animal and Plant Health Inspection Service, the Agricultural Marketing Service, the Human Nutrition Information Service, the Office of International Cooperation and Development, the Soil Conservation Service, the National Agricultural Statistics Service, and the Forest Service.

Elementary and Secondary Education

USDA precollege activities devoted exclusively to mathematics and science are few. However, its Ag in the Classroom Program provides national coordination for States, helping to increase K–12 students' awareness of agriculture's role in the economy and society. USDA's Research Apprenticeship Program annually supports approximately 200 high school students' (primarily minority and female youth) hands-on research experience with scientists in Federal and university laboratories. Scientific literacy among students in grades K–12 is sustained by support from the many 4–H Youth Development Programs. Teacher enhancement is an integral part of these programs.

Higher Education

Because of the need to educate scientists and other leaders for the future, USDA was designated as the lead Federal agency for higher education in the food and agricultural sciences.

Program areas include agriculture, natural resources and forestry, veterinary medicine, home economics, and closely allied disciplines. In response to its congressional mandate, USDA established the Office of Higher Education Programs, which provides national leadership to:

- Achieve and maintain excellence in college and university programs in the food and agricultural sciences.
- Produce outstanding graduates to satisfy the Nation's requirements for scientific and professional expertise.
- Enhance the complementarity and synergism of research and teaching.

In this guise, USDA supports the development of expertise through both predoctoral traineeships at universities and postdoctoral traineeships in Federal laboratories as mechanisms to train personnel for critical positions with government, academia, and the private sector.

USDA's role in undergraduate education is even more extensive. The Office of Higher Education Programs (HEP) functions primarily as a catalyst to promote excellence in education, working in close alliance with the States, the college and university systems, and the private sector. HEP administers several high-priority programs to enhance the quality of education and to develop outstanding scientific and professional expertise at colleges and universities across the Nation: minority expertise development through the Minority Scholars Program, launched in 1994; institutional enhancement through three grants programs, one formula and two competitive, amounting in fiscal year 1994 to approximately $15 million; and national projects that enhance the development of issues and information and the development of strategic planning.

Public Understanding of Science

USDA fosters public understanding of science through a variety of programs, including an annual Food Safety Campaign, held to coincide with National Consumers Week; a Nutrition Education and Training Program; a USDA Meat and Poultry Hotline; and the Agricultural Research Service's 127 Federal laboratories, which provide tours and open house activities to educate the general public on new developments in agricultural research.

HOW MATHEMATICS AND SCIENCE PROGRAMS ARE ADMINISTERED

The Assistant Secretary for Science and Education has overall authority for educational initiatives in USDA. Most agencies referenced in this section are under the Assistant Secretary's direct purview. The Office of Higher Education Programs of the Cooperative State Research Service is the operating division most involved with college and university science education. The Extension Service, Soil Conservation Service, and the Forest Service are most involved with precollege science education. The USDA Joint Council on Food and Agricultural Sciences, established by Congress a decade ago, encourages and coordinates agricultural sciences throughout the United States and among USDA agencies. Its members represent producers, industry, and State and Federal agencies and institutions. USDA offers an unparalleled national network for advancing science and education through its Federal laboratories, State Agricultural Experiment Station System, university scientists and educator cooperators, professional staff, and volunteer lay leaders.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Agricultural Research Service

The Agricultural Research Service operates 122 Federal laboratories and research centers nationwide and 5 overseas. Scientists at these laboratories are valuable resources for science-enrichment initiatives at the precollege and college levels.

Administrator, Agricultural Research Service
U.S. Department of Agriculture
Room 302–A, Administration Building
14th Street and Independence Avenue SW.
Washington, DC 20250–0301
(202) 720–3656

Cooperative State Research Service

The Cooperative State Research Service advances science and technology in support of agriculture, forestry, people, and communities in partnership with the State Agricultural Experiment Station System. Thus, the Service has abundant opportunities to link students with ongoing science programs.

Administrator, Cooperative State
Research Service
U.S. Department of Agriculture
Room 305–A, Administration Building
14th Street and Independence Avenue SW.
Washington, DC 20250–2201
(202) 720–4423

Office of Higher Education Programs

The Office of Higher Education Programs administers several high-priority grants and information programs to enhance the quality of education and to develop outstanding scientific and professional expertise at colleges and universities across the Nation.

Deputy Administrator, Office of
Higher Education Programs
Cooperative State Research Service
U.S. Department of Agriculture
Room 350–A, Administration Building
14th Street and Independence Avenue SW.
Washington, DC 20250–2250
(202) 720–7854

National Agricultural Library

The National Agricultural Library administers library services and programs and is the largest agricultural library in the world.

Director, National Agricultural Library
U.S. Department of Agriculture
10301 Baltimore Boulevard, Room 200
Beltsville, MD 20705–2351
(301) 504–5248

Office of Public Affairs

The Office of Public Affairs provides general information on USDA programs.

Director, Office of Public Affairs
U.S. Department of Agriculture
Administration Building, Room 213–A
14th Street and Independence Avenue SW.
Washington, DC 20250–1301
(202) 720–4623

Extension Service

The Extension Service serves as the Federal partner in the Cooperative Extension Service, a unique educational partnership that includes 74 land-grant colleges and universities as State partners and 3,150 county offices as local partners.

The Cooperative Extension Service is a valuable resource for technology transfer and issue identification at all educational levels and administers the 4–H programs, which together form one of the largest informal youth development programs in the country. The county Cooperative Extension Service office can be contacted for more information about education programs.

Administrator, Extension Service
U.S. Department of Agriculture
Room 338–A, Administration Building
14th Street and Independence Avenue SW.
Washington, DC 20250–0901
(202) 720–3377

Forest Service—Natural Resource Conservation Education Program

The Forest Service expanded its involvement in conservation education in 1990 by launching the Natural Resource Conservation Education Program (NRCEP), which was developed to help implement the Environment Education Act of 1990. The program was established servicewide to strengthen natural resource education efforts. Jointly sponsored by the Forest Service and the National Association of State Foresters (NASF), the program's primary objective is to support a lifelong learning process that promotes the understanding of natural resources and ecosystems—their interrelationships, conservation, use, management, and values to society. NRCEP works with partners to jointly sponsor conservation education projects throughout the Nation. These joint projects combine Federal dollars with State, local, and private funds to increase the money available for conservation education programs. Current NRCEP projects include Project Learning Tree, National Children's Forests, Investigating Your Environment, Girl Scouts of the USA, and Boy Scouts of America. The NRCEP office can be contacted for more information about education programs.

Natural Resource Conservation
Education Program
14th and Independence Avenue SW.
Washington, DC 20090–6090
(202) 205–1545

U.S. DEPARTMENT OF COMMERCE

> *The Nation that best learns to harness its knowledge and stimulate the creation of new ideas will be the economic powerhouse of the 21st century.*
>
> Ronald H. Brown, Secretary
> U.S. Department of Commerce

MISSION

The U.S. Department of Commerce (DOC) encourages, serves, and promotes the Nation's international trade, economic growth, and technological advancement. Within this framework, and with a policy of promoting the national interest through the encouragement of a competitive free enterprise system, the Department provides a wide variety of programs.

BACKGROUND

The Department was established by Congress in 1913 through a reorganization of the Department of Commerce and Labor, which had been created in 1903. Today, DOC has 13 agencies in areas such as international trade, technology, the oceans and the atmosphere, economic and social data, travel and tourism, patents and trademarks, and telecommunication.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

The National Institute of Standards and Technology and the National Oceanic and Atmospheric Administration have missions that involve scientific research and technical applications, and, therefore, have the greatest role in science and mathematics education within DOC.

Elementary and Secondary

Most DOC precollege activities consist of voluntary outreach by the professional staff or cooperative efforts with other organizations, with minimal direct funding available.

Higher Education

DOC has developed a cooperative education program to provide work-related educational opportunities to students, as well as graduate and postdoctoral fellowships.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

DOC agencies that offer education programs self-administer their respective programs.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

National Institute of Standards and Technology, Postdoctoral Programs

As the national laboratory for measurement science and engineering, with emphasis on state-of-the-art research, the National Institute of Standards and Technology maintains a strong program of postdoctoral education. The Institute sponsors numerous postdoctoral research fellowships in collaboration with the National Research Council of the National Academy of Sciences.

Burton H. Colvin
Deputy Director for Academic Affairs
Room A505 Administration
National Institute of Standards and Technology
Gaithersburg, MD 20899
(301) 975–3067/Fax: (301) 975–3530

National Institute of Standards and Technology, Office of Personnel and Civil Rights

At the graduate and to a lesser extent the undergraduate level, the National Institute of Standards and Technology has developed cooperative education programs in conjunction with colleges and universities.

Kimberly J. Goode, Student Coordinator
Office of Personnel and Evaluation
Room A123 Administration
National Institute of Standards and Technology
Gaithersburg, MD 20899
(301) 975–3026

The National Oceanic and Atmospheric Administration (NOAA), Education Affairs Division

Providing leadership in research and education in Earth sciences and contributing scientific knowledge to the environmental science curriculum at every level of education are integral components of NOAA's public stewardship. The Educational Affairs Division of NOAA develops and coordinates an agency-wide effort to educate the general public in Earth systems science and to increase its awareness of NOAA's services. This mission is being realized by increasing the value of NOAA's products and services as educational resources and by tapping the Agency's expertise to assist in the national goal of improving science literacy.

Joan Maier McKean
Educational Affairs, E3
SSMC4, Room 1W225
1305 East West Highway
Silver Spring, MD 20910
(301) 713–1170/Fax: (301) 713–1174

NOAA National Environmental Satellite, Data, and Information Service (NESDIS)

The primary education goal of NESDIS is to enable teachers to access and interpret satellite imagery as a tool in teaching the Earth sciences. Data can be accessed by direct readout from orbiting satellites. NESDIS also provides information to satellite data users who need to access data sets either in real time or archived. Data sets are also available via the Internet. NESDIS maintains online information on the availability of data for earth science applications, including meteorology, oceanography, terrestrial ecology, and agriculture. NESDIS helps teachers learn how to interpret satellite imagery for each of the various applications. Working with individual schools, school districts, and associations, NESDIS offices conduct training courses and participate in training manuals on imagery interpretation. In preparation are satellite imagery interpretation learning modules in both video and digital formats.

NESDIS Training and Information
  Services Branch
NOAA Science Center
5200 Auth Road, Room 601
Camp Springs, MD 20746
(301) 763–8204

NOAA National Marine Sanctuary Program and the National Estuarine Research Reserve System

The mission of the National Marine Sanctuary Program is to identify, designate, and manage areas of the marine environment of special national significance due to their conservation, recreational, ecological, historical, research, educational, or esthetic qualities. Since 1992, 13 sanctuaries have been established covering both coasts and the Gulf of Mexico. The visitor centers at these sites offer education programs to promote and encourage a marine protection ethic among school children, teachers, resource users, the general public, and coastal and marine resource policymakers. Activities include student curricula, field trips, adult lectures, resource user workshops, teacher workshops, volunteer programs, interpretive law enforcement, and a wide variety of printed media. The National Estuarine Research Reserve System has, thus far, more than 18 sites around the U.S. coast that promote public awareness, understanding, appreciation, and wise use of the coastal and marine environments. Like the sanctuaries, the reserves promote the marine protection ethic and informed marine resource policy formulation through educational activities and publication.

Lauri MacLaughlin, Education Coordinator
Sanctuaries and Reserves Division
SSMC4, Room 12409
1305 East West Highway
Silver Spring, MD 20910
(301) 713–3145/Fax: (301) 713–0404

NOAA National Weather Service

The National Weather Service supports educational programs developed by a wide variety of outside organizations. Examples are the American Meteorological Society's Project Atmosphere, the Weather Channel's Weather Classroom, and the NBC/WRC–TV project to develop public access to Earth and space science data visualizations via TV and the Internet. Project Atmosphere prepares teachers to be Atmospheric Education Resource Agents so that they can act as a bridge between meteorologists and teachers in the classroom. The Weather Classroom, which is on the air 10 minutes Monday through Friday, has a companion textbook. A series of publications on severe weather is being distributed to schools and the public to increase awareness and use of the National Weather Radio Service.

Ron Gird
Office of Meteorology
National Weather Service
SSMC2, Room 14110
1325 East West Highway
Silver Spring, MD 20910
(301) 713–1677/Fax: (301) 713–1598

NOAA Public Affairs Office

The Public Affairs Office has a limited number of publications suitable for classroom instruction that teachers can request by mail. Some of these titles are also available on the Internet.

Correspondence Unit
NOAA Public Affairs Office
Room 317
1825 Connecticut Avenue NW.
Washington, DC 20235

U.S. DEPARTMENT OF DEFENSE

> *I cannot imagine a strong America without well-educated Americans. If we are to maintain our hard-earned reputation for having the best Armed Forces in the world, we must start with young men and women who have gotten an edge on life in our schools. That edge includes skills in science, engineering, and mathematics. If the United States is to maintain a strong and responsible democracy and a prosperous economy into the next century, all of our citizens must be well educated. Americans with a good education will have the best chance of helping not only themselves and their families, but our Nation.*
>
> William J. Perry, Secretary
> U.S. Department of Defense

MISSION

The mission of the U.S. Department of Defense (DoD) is to provide for national security.

BACKGROUND

The Department of Defense makes a major investment in education and training. The Department has a vital interest in the ability of our Nation to produce highly trained scientists and engineers. During the past 50 years, the Military Services and Defense Agencies have developed wide-ranging programs that support science and engineering education. The programs evolved independently as each DoD component sought to increase the numbers and to improve the quality of scientists and engineers available to meet their needs.

In traditional educational settings, the Department of Defense provides education for grades K–12 for more than 150,000 dependents in overseas locations through the Department of Defense Dependents Schools System and in U.S. locations where the local civilian schools cannot meet the needs of the dependent population. The DoD service academies, with a total enrollment of 14,000, graduated approximately 3,300 officers in 1990. Additionally, more than 750,000 enlistees are participating in the Montgomery GI Bill Plan, which provides subsidies to assist them in completing their college educations.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

Maintaining technological leadership is critical to both national defense strategy and economic well-being. The United States has consistently sought to develop and deploy superior weapon systems to project an imposing military presence that deters foreign aggression. Further, in today's global marketplace, countries will be able to enjoy continued economic prosperity only if they are able to effectively exploit and adapt to emerging technologies.

To carry out these strategies, the United States, in general, and DoD in particular, must have a supply of scientists and engineers that meets the national need. For DoD, demand for scientists and engineers includes those for civilian employees of the Department, military personnel, and defense contractor employees. DoD sponsors a wide range of educational programs to improve the quality of the pool of personnel from which scientists and engineers can be drawn, and in this way help ensure that science and engineering requirements are satisfied.

The Department directly employs more than 100,000 scientists and engineers, approximately 3 percent of the national pool. Of this number, approximately 25,000 are engaged in research and development in the Department's laboratories and centers.

More than 200 separate programs use a wide variety of approaches and methods to enhance science and engineering education at different educational levels. At the upper level, college and university professors guide advanced research and development efforts for specific DoD projects. Lower-level programs include sponsorship of elementary and secondary school science fairs, providing tutoring and mentorship for students, and demonstrations and laboratory tours that stimulate interest in science and engineering.

Many programs also exist that award scholarships, assistantships, and fellowships.

Elementary and Secondary Education

Precollege programs range from short exposure tours, seminars, and science fairs to intensive tutoring and summer experience programs. The most effective programs are those, such as the High School Apprenticeship Programs, that encourage an interest in and cultivate enthusiasm for science and engineering careers and provide the necessary guidance.

Higher Education

DoD support in the areas of science and engineering education includes undergraduate Reserve Officer Training Corps scholarships, graduate fellowships, national defense-related research conducted by graduate students, and programs designed to enhance recruitment and retention of civilian employees in science and engineering career fields.

Effective recruiting programs include career intern programs, which recruit students from college campuses for an accelerated promotion track and advanced education opportunities. The Co-op Program provides students with early exposure to the work environment and helps foster understanding of Federal job opportunities among students and college personnel, and the postdoctoral research associateships provide a continuing supply of well-qualified graduate scientists and engineers for conducting research in DoD laboratories or in universities through grants and contracts.

DoD's Research Office provides opportunities for graduate students to work with university faculty members and explore topics of interest to the Department. Fellowship opportunities are also provided through DoD laboratories, which may, upon degree completion, provide the recipient with employment opportunities.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

In 1991 the Department of Defense Authorization Act directed the Secretary of Defense to designate an individual within its Office to act as an adviser on science, mathematics, and engineering education. As such, the Director of Defense Research and Engineering (DDR&E) has been identified as the individual responsible for implementing scientific, mathematics, and engineering educational improvement programs within DoD.

The structure for managing science and engineering educational activities within DoD consists of three elements. The DDR&E provides leadership. A Science and Engineering Education Panel (SEEP) serves as a review and advisory body to provide continuous oversight of, and coordination among, the military departments and defense agencies. Lab directors, program directors, and other managers within DoD components execute science and engineering education activities within their organizations.

DoD components exercise a great deal of discretion in conducting the science and engineering programs. The DDR&E does not focus on execution, but instead delegates authority for operation of the programs to the organizational level. The DDR&E serves as an interface with other Federal departments and agencies and, through SEEP, provides guidance and controls.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Office of the Director, Defense Research and Engineering

The Office of the Director, Defense Research and Engineering, oversees research at DoD facilities and advises on DoD educational programs.

Keith Thompson
OSD/ODDR&E
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U.S. DEPARTMENT OF EDUCATION

The Department of Education is fully committed to National Education Goal Four, that by the Year 2000, American students will be first in the world in mathematics and science achievement.

Richard W. Riley, Secretary
U.S. Department of Education

MISSION

The U.S. Department of Education's (ED's) mission is to ensure equal access to education and to promote educational excellence throughout the Nation. The Department has four major responsibilities:

- To collect data and oversee research on America's schools and to disseminate this information to educators and the general public.
- To identify and focus national attention on major issues and problems in education.
- To enforce Federal statutes prohibiting discrimination in programs and activities receiving Federal funds and to ensure equal access to education for everyone.
- To establish policies relating to Federal financial aid for education, to administer distribution of those funds, and to monitor their use.

BACKGROUND

Although the Department of Education has existed as a Cabinet-level agency for a relatively short time, its history dates back to 1867. Originally created as a non-Cabinet-level Department, it soon became the Office of Education, where for more than a century it served primarily to collect information and statistics about the Nation's schools. In the late 1950s the Office's mission was expanded when concerns about the quality of education led to the creation of various programs to improve education. These programs were increased in the 1970s to support national efforts to help students gain equal access to quality education. In October 1979, Congress passed Public Law 96–88, creating the current U.S. Department of Education.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

The Department of Education provides resources to increase opportunities for students to learn mathematics and science. The Department also supports research and assistance programs to improve the quality of mathematics and science education, collects data on student learning, and conducts studies on the condition of science and mathematics education.

ED's role is broadly based and connected to every level of formal education. The Department's programs reach nearly every school system and postsecondary institution. These programs support mathematics, science, and technical education for the disadvantaged, handicapped, and students for whom English is not the primary language. The Department also supports the integration of science and mathematics learning with vocational and technical education. However, since most of ED's funds are allocated by formula, the actual amount expended on mathematics and science education is often determined by the grant recipient.

With the passage in 1994 of the Educate America Act: Goals 2000, which calls for States and school districts to develop systemic plans for educational reform, ED expects that mathematics and science activities will be an increasingly integral part of the new reforms. Also, legislation pending in 1994 would expand the scope of the ED-funded Eisenhower Program to all of the core academic subjects, which would serve to integrate mathematics and science activities to a greater degree with those in other subjects.

Elementary and Secondary Education

Approximately 95 percent of direct ED mathematics and science programs serve the precollege level. The Department aims to provide a balanced portfolio of programs that will benefit teachers, students, and schools at all educational levels. The cornerstone of ED's effort is the Eisenhower Mathematics and Science Education State Grant Program, which is the largest single K–12 mathematics and science program supported by any Federal agency.

Higher Education

Most ED postsecondary education funds are allocated through grants or individual student financial aid. While many programs support opportunities to learn mathematics and science, only a few programs, such as the National Science Scholars Programs, are directly targeted at these subjects; other postsecondary programs address broader educational purposes.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

The Department does not have a single major operating unit specifically charged with overseeing mathematics and science education. Rather, ED is organized by educational level (elementary and secondary education and postsecondary education) and particular educational concern (e.g., educational research and improvement, and vocational, bilingual, and special education). Mathematics and science education activities are carried out within these larger units.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Office of Elementary and Secondary Education

The Office of Elementary and Secondary Education supports elementary and secondary education through programs for compensatory education, school improvement, and special student populations. The Eisenhower State Grant Program supports mathematics and science education. Pending legislation would expand the scope of the Eisenhower Program to all the core subjects. Other programs with a broader educational mission, including compensatory education (Chapter 1), may also support mathematics and science education.

Office of Elementary and Secondary Education
U.S. Department of Education
400 Maryland Avenue SW.
Washington, DC 20202
(202) 401–0113

Office of Postsecondary Education

The Office of Postsecondary Education supports postsecondary education through Federal student aid and programs in higher education, including international education, Historically Black Colleges and Universities, and accreditation. Although most of the programs do not specifically target mathematics and science education, they may be used to support mathematics and science education.

Lawrence P. Grayson
Office of Postsecondary Education
U.S. Department of Education
400 Maryland Avenue SW., Room 3082
Washington, DC 20202–5151
(202) 708–5662

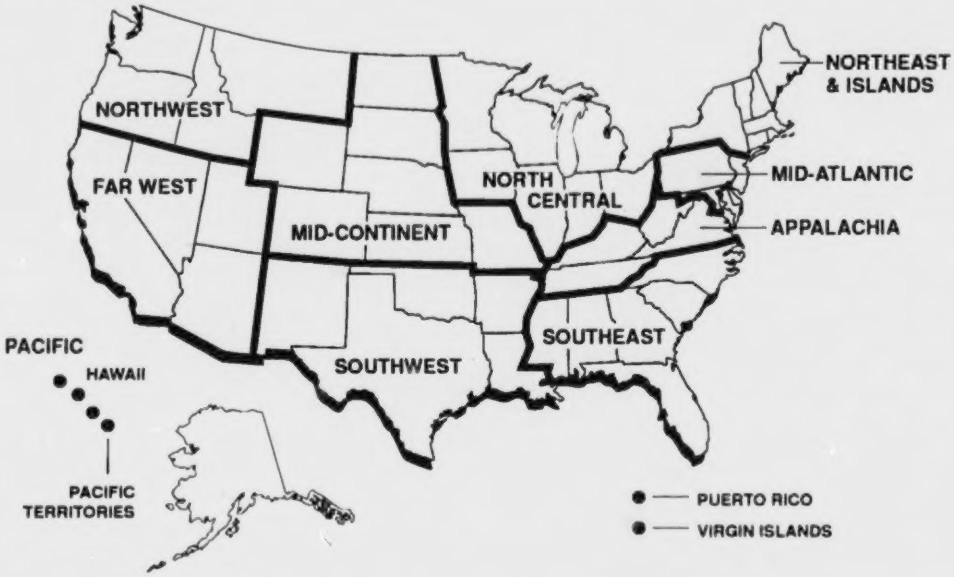
Office of Educational Research and Improvement

The Office of Educational Research and Improvement (OERI) supports and conducts research on education, collects and analyzes education statistics, disseminates information, and supports and improves library education and services. The Eisenhower National Program specifically supports mathematics and science. In general, however, mathematics and science are a part of the broader OERI educational mission.

Office of Educational Research and
Improvement
Programs for the Improvement of Practices
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208–5572
(202) 219–2164

DEPARTMENT OF EDUCATION

EISENHOWER NATIONAL CLEARINGHOUSE AND REGIONAL CONSORTIA



The Eisenhower National Program supports a national clearinghouse and 10 regional consortia that together form a coordinated, field-based network to promote systemic reform of mathematics and science education. Working closely with the Regional Consortia, the Eisenhower National Clearinghouse collects, catalogs, and disseminates information, curriculum materials, and other resources for K–12 mathematics and science education. At the State and local levels, the Regional Consortia provide information and technical assistance to educators and policymakers. The regional service boundaries of the consortia are identical to those of the regional educational laboratories, which are substantially involved in the consortium program.

REGIONAL CONSORTIA

Appalachia Region
Eisenhower Math/Science Consortium at AEL
Charleston, West Virginia

Far West Region
Far West Eisenhower Consortium for Science and Mathematics Education
San Francisco, California

Mid-continent Region
Eisenhower High Plains Consortium for Mathematics and Science
Aurora, Colorado

Mid-Atlantic Region
Mid-Atlantic Eisenhower Consortium for Mathematics and Science Education
Philadelphia, Pennsylvania

North Central Region
Midwest Consortium for Mathematics and Science Education
Oak Brook, Illinois

Northeast and Islands Region
Regional Alliance for Mathematics and Science Education Reform
Montpelier, Vermont, and Andover, Massachusetts

Northwest Region
Northwest Consortium for Mathematics and Science Teaching
Portland, Oregon

Pacific Region
Pacific Mathematics and Science Regional Consortium
Honolulu, Hawaii

Southeast Region
SERVE Consortium for Mathematics and Science Education
Tallahassee, Florida

Southwest Region
Southwest Consortium for the Improvement of Mathematics and Science Teaching
Austin, Texas

NATIONAL CLEARINGHOUSE

Eisenhower National Clearinghouse for Mathematics and Science Education
Columbus, Ohio

NATIONAL PROGRAM OFFICE

Eisenhower National Program
Office of Educational Research and Improvement
Washington, DC

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U.S. DEPARTMENT OF ENERGY

Education is the foundation on which our future prosperity as a Nation and people will be based. The Department of Energy is committed to ensuring that our young people receive the best education possible in the particularly critical fields of mathematics, science, and technology. Department of Energy programs in mathematics and science education range across all educational levels with special emphasis placed on helping women and minority students become full partners in the Nation's scientific and technical enterprise.

Hazel R. O'Leary, Secretary
U.S. Department of Energy

MISSION

We possess the human and physical assets to achieve the mission that follows:

> The Department of Energy, in partnership with our customers, is entrusted to contribute to the welfare of the Nation by providing the technical information and the scientific and educational foundation for the technology, policy, and institutional leadership necessary to achieve efficiency in energy use, diversity in energy sources, a more productive and competitive economy, improved environmental quality, and a secure national defense.

BACKGROUND

DOE was created in 1977 by the Department of Energy Organization Act, which consolidated into one Cabinet-level department the responsibilities previously carried out under the Atomic Energy Commission; the Energy Research and Development Administration; several other small, independent energy-related agencies; and offices in other Federal departments. DOE and its contractors employ approximately 146,000 men and women, more than one-third of whom fill positions in DOE's scientific, engineering, and technical workforce. In addition to DOE's Headquarters components, the Department has an extensive field structure of national laboratories, research facilities, regional operations and support offices, and regional power administrations that are dispersed across urban and rural areas of the United States.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

In recognition of its need for well-educated, highly skilled scientific and technical personnel to carry out its basic research and development and operational missions, DOE has made education an essential part of its mission. DOE sponsors precollege educational programs that serve students, teachers, and the lifelong learner at the national, regional, State, and local levels. DOE's Office of Science Education and Technical Information along with its national laboratories and facilities across the country administer these programs; in particular, the laboratories and facilities have developed specific programmatic missions that target the precollege learner. In many cases, the laboratories and facilities offer educational opportunities that include onsite scientific research. In the past, programs at DOE facilities have reached annually more than 300,000 teachers and students.

Elementary and Secondary

Most DOE activity in precollege science education focuses on (1) training and improving the skills of teachers and (2) establishing comprehensive programs to revitalize mathematics and science education throughout a community or region, in partnership with urban and rural school districts, business, and industry.

Higher Education

As part of a continuum of efforts to keep students in the science pipeline, DOE has expanded its support of undergraduate-level science education programs, particularly those that encourage students from underrepresented groups to pursue scientific and technical studies and participate in cutting-edge research.

New initiatives at the graduate level prepare skilled professionals in energy-related fields with the projected national need.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

DOE educational programs are administered by the Office of Science Education and Technical Information through its 10 national laboratories, more than 30 specialized research facilities, and area, field, regional, and operation offices. Each facility conducts its own education programs and makes its resources available to precollege and university faculty and students. Each center plans and administers a range of precollege and university science education programs, which vary according to laboratory specializations and local needs, and which place special emphasis on providing students and their teachers with hands-on experiences in cutting-edge science and technology.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

U.S. Department of Energy
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Argonne National Laboratory
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Continuous Electron Beam Accelerator Facility
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Bartlesville Project Office
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U.S. Department of Energy
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Rocky Flats Plant
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Sandia National Laboratories/California
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Environmental Outreach and Education Division
Drawer E
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Savannah River Site
Lynn Bertsch
Education Programs, Economic Development Division
Westinghouse Savannah River Company
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Aiken, SC 29801
(803) 644–5405/Fax: (803) 644–5050

Stanford Linear Accelerator Center
P.A. Moore, Education Officer
P.O. Box 4349, Bin–81
Stanford, CA 94309
(415) 926–3826/Fax: (415) 926–2525

Strategic Petroleum Reserve
Durinda Robinson
900 Commerce Road East
New Orleans, LA 70123
(504) 734–4312/Fax: (504) 734–4427

Western Area Power Administration
Charles Marquez
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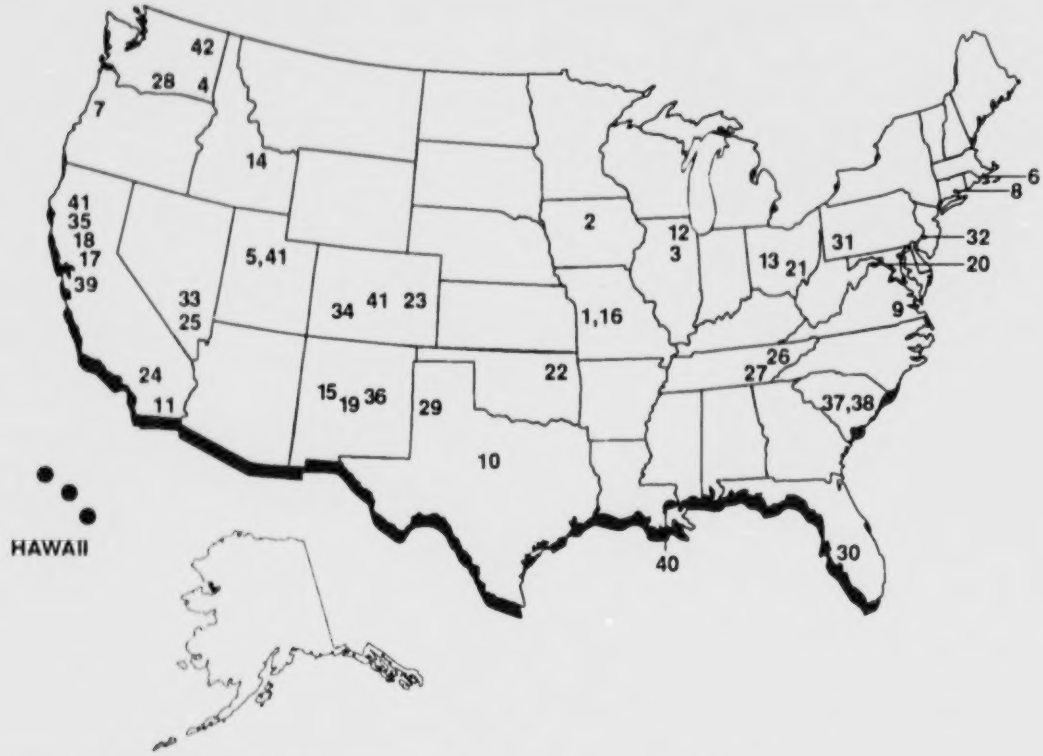
Golden, CO 80401–3402
(303) 231–1652

Westinghouse Hanford Company
Gwen Leth
P.O. Box 1970
Richland, WA 99352
(509) 376–5252/Fax: (509) 376–1404

DEPARTMENT OF ENERGY LABORATORIES



1. **AlliedSignal Aerospace Company, Missouri**, operates the Kansas City Plant to produce nonnuclear components. Production activities are directed toward electrical and electronic products, mechanical products, and plastic products.
2. **Ames Laboratory, Iowa**, conducts fundamental research in the physical, chemical, materials, mathematical, engineering, and environmental sciences that underlie energy-generating, conversion, and transmission technologies.
3. **Argonne National Laboratory, Illinois**, specializes in basic and applied research that supports the development of energy-related technologies.
4. **Associated Western Universities (AWU), Northwest Division, Washington**, is a division of AWU that coordinates many of the science education programs at the Hanford site.
5. **Associated Western Universities, Utah**, is a consortium of 60 colleges and universities that coordinate a variety of national and regional science education programs.
6. **Bates Linear Accelerator Center, Massachusetts**, is operated by the Massachusetts Institute of Technology. The lab supports nuclear physics experiments by researchers from 47 educational institutions and has recently added continuous beam capability.
7. **Bonneville Power Administration, Oregon**, is a DOE power marketing administration that services the Pacific Northwest.
8. **Brookhaven National Laboratory, Connecticut**, conducts applied research in the physical, biomedical, and environmental sciences and in selected energy technologies.
9. **Continuous Electron Beam Accelerator Facility, Virginia**, supports research in nuclear physics and advances knowledge and technology in accelerator physics, electron beams, detector equipment, data acquisition, and superconducting radiofrequency technology.
10. **Dallas Regional Support Office, Texas**, conducts various activities related to energy efficiency and renewable energy.
11. **Energy Technology Engineering Center, California**, provides management, engineering, testing, consultation, and project-monitored services for DOE programs and maintains and operates liquid metal test facilities.
12. **Fermi National Accelerator Laboratory, Illinois**, conceives, develops, constructs, and operates complex research facilities for the fundamental research of high-energy physics and the properties of matter.

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13. **Fernald Environmental Management Project, Ohio**, concentrates on waste management, environmental restoration, and other environmental safety and health compliance issues.

14. **Idaho National Engineering Laboratory, Idaho**, builds nuclear reactors and support equipment; reprocesses nuclear fuel; processes liquid waste; disposes of low-level waste; and conducts research in biotechnology, electric vehicles, and waste management.

15. **Inhalation Toxicology Research Institute, New Mexico**, conducts basic and applied research to improve understanding of the nature and magnitude of the impact on human health of inhaling airborne materials.

16. **Kansas City Regional Support Office, Missouri**, administers grant programs to State and local governments, schools, and hospitals and performs technology transfer activities for DOE. It also serves as the regional office for the States of Iowa, Kansas, Missouri, and Nebraska.

17. **Lawrence Berkeley Laboratory, California**, supports a wide range of research activities in fields ranging from astrophysics to energy conservation.

18. **Lawrence Livermore National Laboratory, California**, specializes in the development and testing of nuclear weapons.

19. **Los Alamos National Laboratory, New Mexico**, has the dual mission of developing nuclear weapons and of applying science and technology to major problems of interest to the country.

20. **Morgantown Energy Technology Center, West Virginia**, conducts research on fossil energy, clean coal technology, and environmental protection.

21. **Mound Facility, Ohio**, is an integrated research, development, and production facility that performs work in support of DOE weapons and energy programs, with an emphasis on development, explosives, and nuclear technology.

22. **National Institute for Petroleum Energy Research, Oklahoma,** operated by BDM-Oklahoma, Inc., conducts research in petroleum technology, processing, and utilization and provides technical and programmatic support to the DOE's National Oil Program.

23. **National Renewable Energy Laboratory, Colorado**, develops renewable and related energy technologies and conducts basic research in energy sciences and technologies, analytic studies, wind, alternative fuels, and ocean energy.

24. **Naval Petroleum Reserves, California**, is responsible for providing emergency sources of liquid fuels for the armed forces.

25. **Nevada Test Site, Nevada**, is an outdoor laboratory for conducting nuclear weapons testing and is managed by the DOE Operations Office in Nevada.

26. **Oak Ridge Institute for Science and Education, Tennessee**, administers a wide range of local, national, and international programs in energy-related education, training, and research.

27. **Oak Ridge National Laboratory, Tennessee**, conducts basic and applied research and development to meet energy and environmental challenges, including competencies in energy production and end uses, environmental science and technology, advanced materials, neutron-based science, and high-performance computing.

28. **Pacific Northwest Laboratory, Batelle, Washington**, offers a broad array of research and development capabilities, with a focus on environmental quality, transfer of scientific knowledge, and engineering innovations.

29. **Pantex Plant, Texas**, manufactures components for, assembles, maintains, evaluates, and disassembles nuclear weapons.

30. **Pinellas Plant, Florida**, develops and produces neutron generators for nuclear weapons initiation and is involved in such areas as thermal batteries, power capacitors, quartz crystal resonators, and related fields.

31. **Pittsburgh Energy Technology Center, Pennsylvania**, conducts research on synthetic liquid fuels, coal combustion and gasification, and related phenomena.

32. **Plasma Physics Laboratory, New Jersey**, conducts research in magnetic fusion through the use of a Tokamak Fusion Test Reactor and associated experimental equipment.

33. **Raytheon Services Nevada, Nevada**, manufactures components for nuclear weapons and also manages nuclear waste.

34. **Rocky Flats Plant, Colorado**, serves as a key facility in nuclear weapons research, development, and production.

35. **Sandia National Laboratories, California**, apply engineering and scientific capabilities to nuclear weapons technology, energy research, and other areas of national interest.

36. **Sandia National Laboratories, New Mexico**, apply engineering and scientific capabilities to nuclear weapons technology, energy research, and other areas of national interest.

37. **Savannah River Ecology Laboratory, South Carolina**, acquires and communicates knowledge of ecological processes and principals.

38. **Savannah River Site, South Carolina**, specializes in developing environmental restoration methodologies, studying natural ecosystems, and educating students in science and technology.

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39. **Stanford Linear Accelerator Center, California**, carries out experimental and theoretical research in elementary-particle physics and develops new techniques for particle acceleration.
40. **Strategic Petroleum Reserve, Louisiana**, stockpiles crude oil and supplements oil supplies in the marketplace.
41. **Western Area Power Administration, Colorado**, markets Federal power and capacity to a service area that covers most of the Western States.
42. **Westinghouse Hanford Company, Washington**, specializes in environmental restoration and waste management, research, and support services and ways to permanently dispose of nuclear waste.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

If this country is to tackle one of the most difficult problems we face today—quality health care for all—it is critical that the public understand the science that underlies health. A scientifically informed citizenry is more likely to value the importance of disease prevention strategies and to act on that understanding. Because science is a life-long learning process we must nurture it in its earliest stages—at the preschool and elementary school levels—and allow our interest and knowledge in it to broaden throughout our adult lives.

Donna E. Shalala, Secretary
U.S. Department of Health and
Human Services

MISSION

The U.S. Department of Health and Human Services (HHS) is the Federal Government's principal agency for promoting the health of Americans, providing essential human services, carrying out clinical and basic biomedical and behavioral research, and providing support for predoctoral and postdoctoral research training in the life sciences. HHS also has long been concerned with the depth and quality of the scientific workforce, and for this reason has launched a comprehensive life sciences education initiative.

BACKGROUND

Created in 1980 from what was formerly the U.S. Department of Health, Education, and Welfare, HHS has the largest budget of all Federal departments. The work of HHS is implemented by the Office of the Secretary and four operating divisions—the Social Security Administration, the Health Care Financing Administration, the Administration for Children and Families, and the Public Health Service (PHS). The Public Health Service is the HHS agency with the major mission in science education.

In 1990 the Assistant Secretary for Health established the Public Health Service Life Sciences Education and Science Literacy Board. The Board was charged with developing strategies for ensuring an adequate pool of well-trained personnel to meet future national needs in the life sciences and increasing the level of scientific understanding among youth and adults in the United States. The Board's first significant action was to host the Prologue to Action: Life Sciences Education and Science Literacy Conference. The Conference brought together experts from across the educational and scientific communities to provide recommendations on the role PHS agencies can play in improving science education. Recommendations made at the Conference form the basis for PHS' strategy on life sciences education and public understanding of science, *Meeting the Challenge: Achieving Results.*

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

While many Federal agencies have broad educational missions that include support for science education and training, none focus specifically on biomedical and behavioral science education or literacy. HHS uses its expertise in the life sciences to provide new and expanded initiatives to support the national education efforts. The bulk of the Department's science education programs at the precollege and undergraduate levels are targeted toward bringing students who are traditionally underrepresented in the life sciences into the science education pipeline and supporting them as they move into the health professions, graduate programs, and research careers. Through its Public Health Service, HHS is increasing the public's understanding and appreciation for the life sciences, increasing the exposure of students at all levels to biomedical and behavioral research, and expanding efforts to recruit and retain underrepresented groups.

Elementary and Secondary

Traditionally, HHS-supported training has focused on graduate and postdoctoral students. However, with the recent decrease in the number of high school and college students majoring in the sciences, the Department has begun to dedicate more of its education and training efforts to precollege education. The Department views science education as a continuum from preschool to adulthood. Elementary programs such as Science Alliance, the Biomedical Research Advancement: Saturday Scholars (BRASS) Program at the middle school level, and the Summer Internship Program at the high school level allow PHS to use its greatest resource—its scientists and technical staff—to increase the enthusiasm of both teachers and students for science.

The Department also offers programs targeted to the important transitional period from junior to senior high, as well as its longstanding program for minority high school students, the Minority High School Student Research Apprentice Program (MHSSRAP). HHS also provides K–12 teachers with workshops and research opportunities and collaborates with them to increase opportunities for interaction with scientists, consult on curriculum-improvement projects, and explore collaborative activities with other public- and private-sector organizations.

Higher Education

To ensure the availability of well-trained professionals to meet national health research goals, graduate support has been the primary emphasis of HHS education programs. This highly successful effort has nurtured many of the newest disciplines in the life sciences today—biotechnology, human genome research, and the search for the biologic components of mental illness. Integral to the Department's mission, graduate training is a stated requirement in section 487 of the Public Health Service Act.

The efforts of HHS to recruit and retain talented undergraduate students in life sciences careers are accomplished primarily through direct financial support—grants, traineeships, and awards—to individuals and institutions. As in its programs for graduates, at the undergraduate level the Department supports students traditionally underrepresented in the life sciences. Longstanding programs like the Minority Access to Research Careers Honors Undergraduate Research Training Program, the Minority Biomedical Research Support Program, and the Health Careers Opportunity Program demonstrate the Department's commitment to this goal.

Public Understanding of Science

Public understanding of science is an important HHS priority. An informed public is better able to make informed judgments about the personal and societal implications of science and technology. Life sciences literacy improves the public's ability to be more effective health care consumers. Within the Department, PHS agencies are examining their programs to determine where science education messages can be more fully integrated into existing disease prevention, health promotion, consumer education, and other public outreach programs. The Department is also spearheading an interagency effort to increase the public's understanding of science by chairing the National Science and Technology Council on Education and Training Working Group on Public Understanding of Science.

HOW MATHEMATICS AND SCIENCE PROGRAMS ARE ADMINISTERED

The Public Health Service is the operating division within the Department of Health and Human Services that is most involved with science education. The agencies within PHS administer their own educational programs, although several PHS-wide efforts are currently underway through the Life Sciences Education and Science Literacy Board. The Office of Science Education Policy at the National Institutes of Health is responsible for policy development and coordination of science and training efforts for the Public Health Service and HHS.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Office of Science Education Policy

The Office of Science Education Policy at the National Institutes of Health (NIH) was established to plan, develop, direct, and coordinate the NIH, PHS, and HHS life sciences education and training program.

Bonnie Kalberer, Director
Office of Science Education Policy
National Institutes of Health
9000 Rockville Pike, Building 1, Room 334
Bethesda, MD 20892
(301) 496–0608

Office of Education

In addition to extensive responsibilities for postdoctoral education, the NIH Office of Education offers a wide variety of programs for students and teachers on the intramural campus. Student programs include all levels from middle school to medical school and graduate school. Programs for teachers include offerings for high school teachers and college faculty designed to enhance their scientific knowledge and teaching skills. The office also acts as a clearinghouse for a variety of educational materials available from NIH.

Michael Fordis, M.D., Director
Office of Education
National Institutes of Health
9000 Rockville Pike, Building 10, Room 1C–129
Bethesda, MD 20892
(301) 496–2427

Office of Grants Information

In addition to providing general information on grant programs, the Office has publications on research training opportunities. For more information on higher education programs, request the booklet, *Research Training and Career Development Programs Supported by the National Institutes of Health.*

Office of Grants Information
Division of Research Grants
National Institutes of Health
Westwood Building, Room 449
5333 Westbard Avenue
Bethesda, MD 20892
(301) 594–7248

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

The Nation's cities will be severely tested by the technology-driven global workplaces of the 21st century. A country that once lived with a minimum-skilled workforce now needs the most technically proficient, adaptable workforce possible. This change can only come about through marked achievements in education. The results will be directly related to the future economic and social well-being of our cities.

Henry G. Cisneros, Secretary
U.S. Department of Housing
and Urban Development

MISSION

The U.S. Department of Housing and Urban Development (HUD) is the principal Federal agency responsible for programs concerned with the Nation's housing needs, fair housing opportunities, and the development and improvement of the Nation's communities.

BACKGROUND

The Department was established in November 1965. Major Offices include Housing, which administers the Federal Housing Administration (FHA) mortgage insurance programs; Community Planning and Development, which administers the Block Grant funds to States and cities for urban improvement projects and funds homeless programs; Public and Indian Housing, which funds the construction and renovation of publicly-owned and managed housing through local Public and Indian Housing Authorities; Fair Housing and Equal Opportunity, which enforces anti-discrimination laws and promotes open housing plans; and Policy Development and Research, which formulates new initiatives and evaluates program experience. HUD's programs are administered through a national network of 70 State and local offices.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

HUD is not directly involved in programs of mathematics and science education. However, the Department strongly supports the National Education Goals as an integral part of its commitment to strengthen families and communities. HUD's programs and activities affecting education focus on the special populations served by the Department, particularly low-income families receiving housing assistance, families in public housing, and minorities.

HOW MATHEMATICS AND SCIENCE PROGRAMS ARE ADMINISTERED

Each office within the Department is responsible for administering its own education programs.

Office of Public and Indian Housing

HUD's child care assistance program supports the goal of early intervention for children entering school. No programs, however, prescribe content of the child care activities or the early childhood curriculum. The Department strongly supports the concept of drug education and prevention for school-age children as a way to help make public housing communities drug-free. Most Department-sponsored drug prevention programs have education components.

Julie Fagan, Office of Public
and Indian Housing
Department of Housing and Urban
Development
451 Seventh Street SW.
Washington, DC 20410
(202) 708–1197

Office of Community Planning and Development

The Department has a program of assistance to Historically Black Colleges and Universities that both builds the capabilities of the institution and involves faculty and students in real-world problems of economics, planning, and social issues in nearby communities.

James Turk, Office of Community
Planning and Development
Department of Housing and Urban
Development
451 Seventh Street SW.
Washington, DC 20410
(202) 708–3176

Office of Lead-Based Paint

In December 1991 HUD created an Office of Lead-Based Paint Abatement and Poisoning Prevention to develop guidelines and regulations applicable to HUD and other federally supported housing programs to ensure that residents of these housing units are safe from the hazards of lead-based paint. While this Office supports a program of public information about these hazards, EPA manages the national information clearinghouse.

Ronald Moroney, Office of Lead-Based Paint
Department of Housing and Urban
Development
451 Seventh Street SW.
Washington, DC 20410
(202) 755–1785

U.S. DEPARTMENT OF THE INTERIOR

Education is the key to unlocking the vast potential of the individual and the means by which society will meet the myriad social, economic, and environmental challenges of the future.

Bruce Babbitt, Secretary
U.S. Department of the Interior

MISSION

As the Nation's principal conservation agency, the U.S. Department of the Interior (DOI) has responsibility for most of our nationally owned public lands and natural resources. This responsibility includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

BACKGROUND

The Department of the Interior was formed on March 3, 1849. The natural resource stewardship responsibilities of the Department are carried out by its 11 bureaus with more than 60 regional and 1,500 field offices.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

DOI's stewardship mission and its extensive scientific and technological expertise present unique opportunities for educational outreach. With more than 440 million acres of land, 467 wildlife refuges, 75 fish hatcheries, and 356 national parks, including battlefields and seashores, DOI provides many opportunities for people to learn about science by observing nature firsthand.

Elementary and Secondary

About half of the Department's precollege efforts directly support students through workshops, informal classes, and student work appointments. DOI offers educational activities at its many field sites, develops curriculum materials, and provides educational opportunities to special populations. In addition, the Department supports mathematics and science instruction at the Bureau of Indian Affairs schools.

Higher Education

The majority of DOI's undergraduate programs provide student support, mostly in the form of student work appointments. Many of the bureaus enter into partnerships with State and academic institutions to further research and education in natural resource management. In addition, DOI provides support to Historically Black Colleges and Universities and to the Hispanic Association of Colleges and Universities. Graduate research programs fund basic and applied research and generate Earth science data. The Department also offers predoctoral and postdoctoral fellowships.

Public Understanding of Science

Fostering effective stewardship of the Nation's public lands and resources is a top Department priority. With hundreds of parks, refuges, fish hatcheries, and other field sites, many opportunities exist for visitors to learn about science by observing nature firsthand.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

DOI's educational programs are administered by its 11 bureaus. Because the Department's education outreach is a grassroots effort, information requests can be handled more effectively by the

DOI Field Offices and facilities listed in the State Highlights section of this publication.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Bureau of Indian Affairs (BIA)

BIA works with tribal governments and Alaskan Native village communities to encourage and support tribal efforts to self-govern and to provide needed programs and services on the reservations. Developing forest lands, leasing mineral rights, directing agricultural programs, and protecting water and land rights are included in this responsibility.

Charles Geboe, Branch Chief
Elementary and Secondary Education
Bureau of Indian Affairs
Department of the Interior
1849 C Street NW.
Mail Stop 3512, Code 521
Washington, DC 20240
(202) 219–1127/Fax: (202) 219–9583

Bureau of Land Management (BLM)

BLM manages, under the principles of multiple use and sustained yield for the benefit of all Americans, our Nation's public lands of approximately 270 million acres located primarily in the West and in Alaska, which comprise about one-eighth of our Nation's land area. BLM promotes natural resource and environmental education through a broad range of activities conducted by BLM field offices located in 12 western States and in scattered areas throughout the East. State offices can provide information on local district offices that sponsor environmental education programs.

Mary Tisdale, Chief, Office of Environmental Education and Volunteers
Bureau of Land Management
1849 C Street NW., LS–Room 1275
Washington, DC 20240
(202) 501–9649/Fax: (202) 219–2493

Bureau of Mines (BOM)

BOM's mission is to help ensure that the Nation has adequate mineral supplies for security and other needs. BOM research contributes to improved technology for the extraction, processing, use, and recycling of the Nation's mineral resources at a reasonable cost and without harm to the environment or the workers involved.

David Barna, Office of Public Information
U.S. Bureau of Mines, MS–1040
Department of the Interior
Washington, DC 20241
(202) 501–9649/Fax: (202) 219–2493

Bureau of Reclamation (BOR)

BOR's mission is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of safe and dependable water supplies for agricultural, municipal and industrial, and domestic users; to produce clean, renewable hydroelectric energy at Reclamation powerplants; to protect and improve water quality; to provide recreational and fish and wildlife benefits for the public; to enhance river regulation and navigation; and to control damaging floods.

Cathy Marsh, Environmental Education Coordinator
Bureau of Reclamation
Denver Center, Building 67, (D–5110)
Denver, CO 80225
(303) 236–3289, ext. 311/Fax: (303) 236–3573

Minerals Management Service (MMS)

Minerals Management Service provides a range of educational services to teachers and students regarding the management of offshore natural gas, oil, and other mineral resources while, at the same time, safeguarding the environment. Information is available on a variety of subjects, including geology, environmental and socioeconomic sciences, marine biology, underwater archaeology, and beach restoration. MMS professionals have worked with schools in some states to develop energy resource curricula. Teacher inservice programs and classroom visitations may include videos (both VHS and interactive), booklets, brochures, posters, newsletters, slide presentations, and statistical and other off-the-shelf technical publications. Some of these materials are available upon request through the MMS headquarters or the MMS Regional Offices. Availability may be limited, but arrangements may be made for duplication of some materials at minimal cost.

Office of Communications and Governmental Affairs
Minerals Management Service
Education Coordinator
Department of the Interior
1849 C Street NW., MS 0500
Washington, DC 20240
(202) 208–3985/Fax: (202) 208–6198

National Biological Survey (NBS)

The National Biological Survey, a new bureau, gathers, analyzes, and disseminates the biological information necessary for good stewardship of natural resources. Fifteen science centers and numerous field stations, along with cooperative research units at colleges and universities, across the country conduct biological research, inventory and monitoring, and information transfer projects. NBS is designed to serve as an information clearinghouse and a source of solid scientific information for use by local communities, development interests, wildlife managers, land owners, and private and nonprofit groups.

Office of Public Affairs
National Biological Survey
3070 Main Interior Building
Washington, DC 20240
(202) 482–3048

National Park Service (NPS)

NPS' principal responsibility is to administer the National Park System. The system is composed of more than 370 areas of great diversity, including parks, monuments, historic sites, battlefields, seashores and lakeshores, and recreational areas.

Bob Huggins, Division of Interpretation
National Park Service
Department of the Interior
P.O. Box 37127
Washington, DC 20013–7127
(202) 523–5270/Fax: (202) 523–0162

Office of the Secretary (OS)

OS coordinates all education programs implemented by its bureaus and agencies through the Department of the Interior Education Committee. OS supports education efforts through several ongoing projects, such as the education program inventory, a coordinated education program evaluation effort and a joint project for submission of products for the Internet, in cooperation with the Eisenhower National Clearinghouse.

Office of the Secretary
Education Coordination
Patricia Aragon
1849 C Street NW., MS 2759
Washington, DC 20240
(202) 208–5590/Fax: (202) 208–3620

Office of Surface Mining Reclamation and Enforcement (OSMRE)

OSMRE's mission is twofold: to protect people and the environment from the adverse effects of coal mining, while recognizing the Nation's vital need for energy from coal. To that end, OSMRE regulates current mining operations, and helps repair lands that were mined and left unreclaimed and abandoned in the past.

Sarah Donnelly
Chief of the Branch Training and
Technical Information
Office of Surface Mines
Department of the Interior
1951 Constitution Avenue NW.
Room 640 (NC)
Washington, DC 20240
(202) 343–1828/Fax: (202) 343–1512

Territorial and International Affairs (TIA)

The Department of the Interior has administrative responsibility for coordinating Federal policy in the territories of American Samoa, Guam, the Virgin Islands, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific (Republic of Palau). TIA provides technical assistance to the freely associated States of the Republic of the Marshall Islands and the Federated States of Micronesia under Section 226 of the Compact of Free Association. TIA's mission is to promote economic, social, and political development in these territories that will foster self-governing and active participation of the peoples of these territories in the determination of their own futures.

Darla Knoblock, Director
Technical Assistance
Territorial and International Affairs
Department of the Interior
1849 C Street NW., MS 4328
Washington, DC 20240
(202) 208–4707/Fax: (202) 208–7585

U.S. Fish and Wildlife Service (FWS)

FWS' mission is to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people. Migratory birds, endangered species, freshwater and anadromous fisheries, and certain marine mammals are primary FWS responsibilities.

Jim Massey, Office of Training and Education
U.S. Fish and Wildlife Service
Department of the Interior
4401 North Fairfax Drive, MS 304 WEBB
Arlington, VA 22203
(703) 358–2504/Fax: (703) 358–2283

U.S. Geological Survey (USGS)

USGS' mission is to provide geologic, topographic, and hydrologic information that contributes to wise management of the Nation's natural resources, and that promotes its peoples' health, safety, and well-being. This information consists of maps, databases, and descriptions and analyses of the water, energy, and mineral resources, land surface, underlying geologic structure, and dynamic processes of the Earth.

Chair, USGS Education Committee
U.S. Geological Survey
116–E National Center
Reston, VA 22092
(703) 648–7114/Fax: (703) 648–7069

U.S. DEPARTMENT OF JUSTICE

We must work to free our teachers of the social burdens in our schools, such as drugs and violence, so that they may rise to the educational challenge of teaching our children the skills that will meet our Nation's growing scientific and technological needs. Only by making this investment in our children now will they be prepared to maintain America as a first-rate Nation.

Janet Reno, U.S. Attorney General
U.S. Department of Justice

MISSION

The U.S. Department of Justice (DOJ) provides legal advice to the President, represents the Executive Branch in Federal courts, investigates Federal crimes, enforces Federal laws, operates Federal prisons, and provides law enforcement assistance to State and local communities.

BACKGROUND

The Office of the Attorney General was established in 1789, and the Department of Justice was subsequently established in 1870. The Department is labor intensive, relying heavily upon its personnel to fulfill its mission. Professionals of the highest caliber comprise the Department's many litigating divisions, law enforcement offices, and management and coordination offices.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

Compared with the Federal science mission agencies, the Department of Justice lacks a significant focus on mathematics and science-related occupations. However, the Department conducts numerous programs that support the national educational goals, including improving student performance in mathematics and science. In addition, mathematics and science play an important role in certain aspects of the Department's mission, particularly the laboratory operations of the Federal Bureau of Investigation and the Drug Enforcement Administration. Opportunities for the active participation of students in the scientific endeavors of the Department are necessarily limited by the confidential nature of investigations into illegal activity and the need for security clearance.

Elementary and Secondary

Most programs offered by DOJ are part of delinquency prevention or volunteer educational outreach, and are not directly related to mathematics or science education.

Higher Education

DOJ activities have an indirect impact in the areas of education programs in mathematics and science. The Department awards research grants and sponsors graduate research fellowships and summer intern programs.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

While DOJ is not a leader among Federal agencies in the field of mathematics and science education, the National Institute of Justice, the Federal Bureau of Investigation, and the Drug Enforcement Administration sponsor programs related to the Department's research efforts.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

The National Institute of Justice of the Office of Justice Programs

Created in 1968 as DOJ's principal research branch, the National Institute of Justice awards grants to colleges and universities to conduct studies on the prevention and control of crime or to improve scientific approaches to the forensic investigation of crime. The Institute also sponsors graduate research fellowships to support work on dissertations in the field of criminal justice.

Office of the Director
National Institute of Justice
633 Indiana Avenue NW., Room 846
Washington, DC 20531
(202) 307–2942

The Federal Bureau of Investigation

The Federal Bureau of Investigation provides training and research to law enforcement through the Forensic Science Research and Training Center. Research at the Center focuses on the development of new methods in forensic science. The Center operates a summer student intern program for upper-level college students.

John Hicks, Assistant Director
Laboratory Division
Federal Bureau of Investigation
FBI Building, Room 3090
Ninth Street and Pennsylvania Avenue NW.
Washington, DC 20535
(202) 324–4410

The Drug Enforcement Administration

The Drug Enforcement Administration supports drug investigations through the eight forensic laboratories located throughout the Nation. Chemists in these facilities participate in various educational activities.

Aaron P. Hatcher, III
Deputy Assistant Administrator
Office of Forensic Sciences
Drug Enforcement Administration
Washington, DC 20537
(202) 307–8866

U.S. DEPARTMENT OF LABOR

For most Americans, there is but one manageable source of economic security for themselves and their families: the ability to get the knowledge and skills the market demands. Our challenge is to provide every man and woman, student and worker, with the opportunity to acquire the academic and technical skills they need to achieve the economic security we all want.

Doug Ross, Assistant Secretary of
Labor for Employment and Training
U.S. Department of Labor

MISSION

The U.S. Department of Labor's (DOL's) basic concern is quality of life for American workers. The Department enforces laws that protect jobs, pension rights, and worker safety and health; helps people find jobs; sponsors training for those who need it; guides the Nation's unemployment insurance system; monitors changes in employment and prices; and provides services and information to workers, employers, teachers, students, business people, government officials, and others.

BACKGROUND

The Department was created as a cabinet-level agency by Congress in 1913 "to foster, promote, and develop the welfare of the wage earners of the United States, to improve their working conditions, and to advance their opportunities for profitable employment." Predecessor agencies had existed since 1884, but this legislation marked the first time that a cabinet department was created with the primary function of furthering the interests of working people.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

For most agencies and offices within DOL, the major training activity is directed toward Federal staff, and in some cases, State and local staff, to help them carry out their responsibilities. The Department's Employment and Training Administration (ETA) also is involved in broad basic mathematics and science education and vocational training for unskilled and unemployed workers. Training activities focus on vocational technical training skills and basic literacy education, including mathematics and general equivalency diploma (GED) preparation, which is generally provided outside the traditional education system.

Among other activities, ETA funds training programs to enable workers to gain the skills they need for employment, primarily those authorized by the Job Training Partnership Act (JTPA), which includes a system of decentralized State and local programs, funded through grants to the States, and the Job Corps.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

DOL's mathematics and science education programs are administered by the Department's Employment and Training Administration and operated at the State or community levels.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Employment and Training Administration Office of Employment and Training Programs

The Office of Employment and Training Programs administers programs for economically disadvantaged youth and adults.

Donald Kulick, Acting Director
Office of Employment and Training Programs
Employment and Training Administration
U.S. Department of Labor
200 Constitution Avenue NW., Room N4469
Washington, DC 20210
(202) 219–5580/Fax: (202) 219–7190

Employment and Training Administration Office of Worker Retraining and Adjustment Programs

The Office of Worker Retraining and Adjustment Programs administers programs for dislocated workers.

Office of Worker Retraining and
  Adjustment Programs
Employment and Training Administration
U.S. Department of Labor
200 Constitution Avenue NW., Room N5426
Washington, DC 20210
(202) 219–5577/Fax: (202) 219–5938

Job Corps

The Job Corps administers a network of residential training centers that prepare severely disadvantaged youth aged 16–24 for productive employment and entrance into vocational/technical schools, junior colleges, military service, or other institutions for further education and training.

Judy Vitale, Unit Chief
Education and Enrollee Support Unit, Job
  Corps
Employment and Training Administration
U.S. Department of Labor
200 Constitution Avenue NW., Room N4507
Washington, DC 20210
(202) 219–5556/Fax: (202) 219–5183

U.S. DEPARTMENT OF TRANSPORTATION

Sound technological investments can promote long-term economic growth that creates jobs and protects the environment; can help make government more efficient; and can provide the basis for national leadership in application of new technology to economic growth.

Federico F. Pena, Secretary
U.S. Department of Transportation

MISSION

The U.S. Department of Transportation (DOT) will shape the National Transportation Policy to "tie America together" with a safe, technologically advanced, and efficient transportation system that promotes economic growth and international competitiveness now and in the future, and contributes to a healthy and secure environment for us and our children.

BACKGROUND

Since 1967 the Department has helped keep the Nation's transportation system running. The Department functions through 10 operating administrations, each of which oversees a different aspect of transportation and implements its own programs directly, reporting to the Secretary of Transportation.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

Mathematics and science education is a critical support activity to ongoing DOT programs. Education conveys new technical skills to professionals already in the transportation community and develops a pool of trained technical talent to move into jobs in the transportation sector.

Elementary and Secondary

The Federal Aviation Administration (FAA) offers aviation education programs for educators at all levels (K–college) that stimulate interest in mathematics and science for students of all ages. FAA-sponsored programs for students include Air Bear for elementary students, the International Aviation Art Contest, and the Aviation Career Education (ACE) Academy summer program for high school students, which focuses on the science of flight and the study of science and careers. In addition, the Research and Special Programs Administration's Volpe National Transportation Systems Center encourages awareness of transportation careers.

Higher Education

Institutions of higher education can receive DOT assistance, including funding to support curricula and grants for research related to transportation. The Department sponsors cooperative education programs, research fellowships, and scholarships. In addition, most DOT operating administrations have technical laboratories with advanced technology materials and are required to engage in research application and technology transfer activities. The Department is committed to increasing involvement of Historically Black Colleges and Universities and Hispanic serving institutions in funded programs and activities.

HOW MATHEMATICS AND SCIENCE PROGRAMS ARE ADMINISTERED

Each operating administration within the Department of Transportation is responsible for its own education programs.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Office of Research Policy and Technology Transfer, Research and Special Programs Administration (RSPA)

RSPA research and technology programs provide the oversight necessary to ensure that DOT's research and development (R&D) program is effectively advancing U.S. transportation technology and expertise. RSPA's multimodal systems approach provides the Secretary with a critical counterbalance to the focus on the needs of individual modes of transportation in the other DOT operating administrations. The research and technology programs also provide analyses of specific technology areas, and ensure that the Department's efforts integrate with Government-wide technology initiatives and thrusts.

Of particular importance in the science and technology education areas, these activities also help ensure that DOT's R&D results and other innovative efforts from across the country are made available in a useful form to Federal, State, and local elected and appointed officials, the transportation community, and academia.

Elaine E. Joost
Deputy Director
Office of Research Policy and Technology Transfer (ORT–2)
Research and Special Programs Administration
400 Seventh Street SW.
Washington, DC 20590
(202) 366–4208

Federal Aviation Administration (FAA)

The FAA conducts an active aviation education program that promotes public understanding and supports the growth of civil aviation as well as career awareness. Programs focus on diversity and cultivation of student interest in mathematics and the sciences as applied to aviation and include even the youngest of students. To support the development of effective aviation education programs at all levels, the FAA maintains a network of aviation education resource centers across the country, develops curriculum guides and supports teacher workshops, conducts youth programs, and establishes formal partnerships with industry and education organizations. The FAA contributes aviation education-related information to the Federal Information Exchange/Minority Online Information System (FEDIX/MOLIS), an electronic clearinghouse of aviation educational materials, resources, and references.

Phillip S. Woodruff, Division Manager
Aviation Education Division (AHT–100)
Federal Aviation Administration
400 Seventh Street SW., Plaza 100
Washington, DC 20590
(202) 366–7018/Fax: (202) 366–3786

National Highway Institute

The National Highway Institute administers the Eisenhower Transportation Fellowship Program, which includes the Eisenhower Graduate Fellowships, the Eisenhower Grants for Research Fellowships, the Eisenhower Historically Black Colleges and Universities Fellowships, the Eisenhower Hispanic Serving Institutions Fellowships, the Eisenhower Postdoctorate Fellowships, and the Eisenhower Faculty Fellows programs. The Institute also administers the College Curriculum Program, where materials developed for short courses and tested by practitioners for effectiveness are shared with colleges and universities.

Director
National Highway Institute (HHI)
Turner-Fairbank Highway Research Center
6300 Georgetown Pike
McLean, VA 22101
(703) 285–2770

U.S. DEPARTMENT OF VETERANS AFFAIRS

The basics of education are not enough anymore; in order to be competitive in the future, Americans will need a foundation of quality education, and they will need to continue learning throughout their lifetime. I believe, as the President does, that our educational system can achieve international excellence, if we establish clear standards and support realistic student loan programs. The VA will continue to be a major contributor in this area through GI Bill benefits and our involvement in health care education.

Jesse Brown, Secretary
U.S. Department of Veterans Affairs

MISSION

The mission of the U.S. Department of Veterans Affairs (VA) is to serve America's veterans and their families with dignity and compassion and to be their principal advocate in ensuring that they receive the care, support, and recognition they have earned in service to this Nation.

BACKGROUND

The Department of Veterans Affairs, formerly the Veterans Administration, was elevated to Cabinet level in 1989. The Department has three main components that administer veterans' programs: the Veterans Health Administration, the Veterans Benefits Administration, and the National Cemetery System.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

The vast VA workforce, representing diverse science and technology-related professions, includes physicians, nurses, statisticians, architects, and computer specialists. As part of its mission to provide health care to eligible veterans, the VA provides training and education for health professionals and conducts medical, health, and rehabilitation research. The Department supports graduate-level education through associated health trainee programs. The Department also administers education benefits to eligible veterans, service persons, and dependents.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

Two VA administrative offices are involved in education activities: the Veterans Health Administration and the Veterans Benefits Administration.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

The Veterans Health Administration Office of Academic Affairs

The Veterans Health Administration Office of Academic Affairs conducts the Nation's largest coordinated education and training effort for the health professions.

Veterans Health Administration
Office of Academic Affairs (14)
810 Vermont Avenue NW.
Washington, DC 20420
(202) 535–7091

Veterans Benefits Administration Education Service

The Veterans Benefits Administration Education Service administers several basic educational programs for veterans, service persons, and eligible dependents.

Veterans Benefits Administration
Education Service (22)
810 Vermont Avenue NW.
Washington, DC 20420
(202) 233–5154

U.S. ENVIRONMENTAL PROTECTION AGENCY

Environmental education is an important new initiative at EPA. However, widespread improvements in environmental literacy require a unified commitment from government, business, environmental organizations, and educators alike to increase the quality of our environmental education initiatives.

Carol M. Browner, Administrator,
U.S. Environmental Protection Agency

MISSION

The U.S. Environmental Protection Agency (EPA) is responsible for implementing the Federal laws designed to protect the public from environmental hazards, enhance the quality of our natural environment, and expand our knowledge of the environment. The Agency endeavors to accomplish its mission systematically by proper integration of a variety of research, monitoring, standard-setting, enforcement, and educational activities. As a complement to its other activities, EPA coordinates and supports research and anti-pollution activities of State and local governments, private and public groups, individuals, and educational institutions. EPA also monitors the operations of other Federal agencies with respect to their impact on the environment.

BACKGROUND

The Environmental Protection Agency was created through Reorganization Plan #3 of 1970, which was devised to consolidate the Federal Government's environmental regulatory activities into a single agency. The plan was sent by President Nixon to Congress on July 9, 1970, and the Agency began operation on December 2, 1970.

The enactment of major new environmental laws and important amendments to older laws in the 1970s and 1980s greatly expanded EPA's responsibilities. The Agency now administers 10 comprehensive environmental protection laws: the Clean Air Act; the Clean Water Act; the Safe Drinking Water Act; the Comprehensive Environmental Response, Compensation, and Liability Act; the Federal Insecticide, Fungicide, and Rodenticide Act; the Toxic Substances Control Act; the Marine Protection, Research, and Sanctuaries Act; the Uranium Mill Tailings Radiation Control Act; and the Pollution Prevention Act. In addition, the National Environmental Education Act was passed in 1990 that gave EPA, for the first time, the authority to develop a national environmental education program.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

As political leaders and the public continue to recognize the urgency and global nature of environmental challenges, the EPA will be required to respond with still higher quality research, innovative analysis, and sound strategies for public involvement. Currently, more than one-third of the Agency's employees are scientists and engineers, and the demands for highly educated and talented staff will only increase as the scientific complexity of environmental problems increases. Clearly, the Agency has a vested interest in ensuring that students emerging from the Nation's education system are literate in mathematics and science, and that the Nation produces an adequate supply of world-class scientists and engineers. In addition, the Agency believes that an environmentally educated public is the best means to bring about voluntary changes in personal behaviors that affect the environment.

Elementary and Secondary Education

As a result of the passage of the National Environmental Education Act of 1990, the Agency will focus on two broad areas of environmental education: improving basic science literacy as the core of environmental education for students in grades K–12 (and colleges), and informing the general public about environmental consequences of their individual and collective actions and motivating them to address environmental problems.

Higher Education

EPA offers predoctoral fellowships and traineeships and postdoctoral fellowships. Undergraduate programs provide opportunities for research, work study, and other forms of assistance to students.

HOW MATHEMATICS AND SCIENCE PROGRAMS ARE ADMINISTERED

The Agency's headquarters in Washington, D.C., maintains overall planning, coordination, and control of EPA programs, and two offices at headquarters have responsibilities related to education programs. To ensure that EPA is truly responsive to the American people, the Agency has established 10 regional offices, and each of these offices has an environmental education coordinator. In addition, the EPA maintains field offices in the following categories: laboratories, investigations, and administration.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Environmental Education Division

The mission of the Environmental Education Division is to advance and support national and international environmental education efforts, to develop an environmentally conscious and responsible public, and to inspire in all individuals a sense of personal responsibility for the care of the environment.

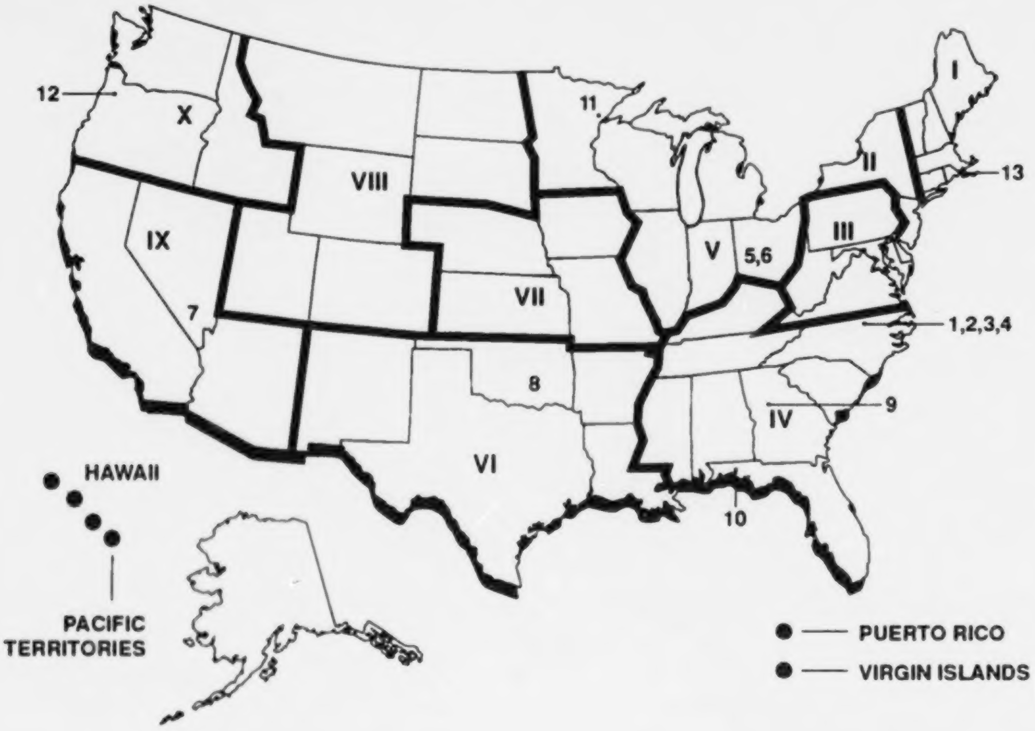
Environmental Education Division
U.S. Environmental Protection Agency
401 M Street SW. (1707)
Washington, DC 20460
(202) 260–4965

Office of Research and Development

The Office of Research and Development (ORD) coordinates education programs related to research efforts. Each of ORD's facilities and offices plans and administers a range of programs, precollege through graduate, which vary according to laboratory specialization and community needs.

Office of Research and Development
U.S. Environmental Protection Agency
401 M Street SW. (H–8105)
Washington, DC 20460
(202) 260–7671/Fax: (202) 260–0036

ENVIRONMENTAL PROTECTION AGENCY
REGIONAL OFFICES AND RESEARCH LABORATORIES



Regional Offices

To ensure that EPA is truly responsive to the American people, it has established 10 regional offices. Each office has an Environmental Education Coordinator who oversees participation in regional environmental education programs, which include a variety of activities. Materials and information on environmental issues are also available.

Region I	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Region II	New Jersey, New York, Puerto Rico, Virgin Islands
Region III	Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia
Region IV	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina Tennessee
Region V	Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin
Region VI	Arkansas, Louisiana, New Mexico, Oklahoma, Texas
Region VII	Iowa, Kansas, Missouri, Nebraska
Region VIII	Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming
Region IX	Arizona, California, Hawaii, Nevada, American Samoa, Guam
Region X	Alaska, Idaho, Oregon, Washington

Research Laboratories and Offices

The Office of Research and Development has research laboratories and offices that plan and administer a range of environmental programs, precollege through graduate level, which vary according to laboratory specialization and community needs.

1. Air and Energy Engineering Research Laboratory, Research Triangle Park, North Carolina
2. Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina

BEST COPY AVAILABLE

3. Health Effects Research Laboratory, Research Triangle Park, North Carolina
4. Environmental Criteria and Assessment Office, Research Triangle Park, North Carolina
5. Risk Reduction Engineering Laboratory, Cincinnati, Ohio
6. Environmental Monitoring Systems Laboratory, Cincinnati, Ohio
7. Environmental Monitoring Systems Laboratory, Las Vegas, Nevada
8. Robert S. Kerr Environmental Research Laboratory, Ada, Oklahoma
9. Environmental Research Laboratory, Athens, Georgia
10. Environmental Research Laboratory, Gulf Breeze, Florida
11. Environmental Research Laboratory, Duluth, Minnesota
12. Environmental Research Laboratory, Corvallis, Oregon
13. Environmental Research Laboratory, Narragansett, Rhode Island

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA's mission in aeronautics and space, its unique facilities, and specialized workforce provide educators and students a national resource for enhancing and expanding scientific and technological competence. The Agency's commitment to promoting excellence in America's education system is carried out through the integrated application of science, mathematics, and technology that is inherent in NASA's research capabilities, scientific discoveries, advanced technologies, and future explorations.

Daniel S. Goldin, Administrator
National Aeronautics and Space Administration

MISSION

As the agency responsible for the Nation's civilian aerospace program, the National Aeronautics and Space Administration (NASA) plays a major role in fostering technological and scientific advances. In addition to building and operating the world's most advanced aircraft and spacecraft, NASA conducts a coordinated program of basic and applied research in virtually all areas of natural science and engineering. With the academic researchers and industry that support the agency's effort, NASA helps build the Nation's scientific and technological base.

BACKGROUND

On October 1, 1958, the U.S. Congress created the National Aeronautics and Space Administration through the Space Act. The legislation combined certain military space research programs with the existing National Advisory Committee for Aeronautics to create a unique civilian agency for aeronautical and space activities.

Current major areas of activity include human spaceflight, space operations, aeronautics and space technology development, space science, life science, and Earth science and applications. Nine Field Centers located across the country provide NASA with the expertise to conduct research in all facets of aeronautics and space.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

To maintain a leadership role in the 21st century, NASA and other Federal agencies must contribute to systemic reform of American education. NASA's education vision is to promote excellence in America's school systems by enhancing and expanding scientific and technological competence. Fulfillment of this vision will ensure a sufficient talent pool to preserve NASA and U.S. leadership in aeronautics, Earth and space science, and technology into the next century. NASA uses its inspiring mission, unique facilities, and specialized workforce to conduct science, mathematics, and technology education programs and activities.

Elementary and Secondary

To nurture early enthusiasm for science, mathematics, and technology, NASA has developed a broad range of programs and services for students at the elementary and middle school levels. These programs are specifically designed to use space and aeronautics as the vehicle to inspire students' interest in science, mathematics, and technology. Once interest has been captured, it is imperative to follow through at the secondary level with both formal and informal education experiences. NASA provides programs for precollege teachers that have been specifically designed to enhance their knowledge, skills, and experience. Additionally, in a continuing effort to address groups that have not been adequately represented in the science and engineering workforce, NASA offers educational programs that are specifically tailored for under-represented minority students at the middle school and high school levels, as well as for minority teachers and faculty members.

Higher Education

NASA's higher education programs target faculty, graduate and undergraduate students, colleges and universities, and other organizations with an interest in aeronautics and space science research, education, and related public service. NASA's programs at the collegiate level feature active participation in NASA research, undergraduate and graduate student financial support, and faculty preparation and enhancement activities.

Public Understanding of Science

NASA Visitor Centers offer the public a unique chance to see first-hand the past, present, and future of U.S. aerospace research. The Centers display hundreds of artifacts, scale models, and pieces of actual space equipment. Many of the Centers also offer special films, programs, and attractions that highlight the achievements of the past 30 years or future explorations.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

NASA's national education programs are carried out through NASA Headquarters and the nine NASA Field Centers. The Headquarters Education Division of the Office of Human Resources and Education has four branches: Elementary and Secondary, Higher Education, Technology and Evaluation, and Administrative Management. The Education Division oversees education programs and activities at a national level, while the nine Field Centers administer segments of the national programs, as well as additional regional and local programs. To find the Field Center serving your State, see the State Highlights section of this publication.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Elementary and Secondary Branch

NASA's Elementary and Secondary Branch Office oversees a broad range of programs and services for educators and students at the elementary and secondary levels.

Elementary and Secondary Branch
Education Division, Code FEE
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1518

Higher Education Branch

NASA's Higher Education Branch Office oversees higher education programs and services created for faculty, graduate and undergraduate students, and colleges and universities.

Higher Education Branch
Education Division, Code FEH
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1531

Technology and Evaluation Branch

NASA's Technology and Evaluation Branch Office evaluates advanced information and communications technologies and develops related programs, products, and services.

Technology and Evaluation Branch
Education Division, Code FET
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1540

NASA Field Centers

Each NASA Field Center has an educational programs officer who is responsible for precollege education programs. In addition to administering national programs, the NASA Field Center offers programs and services to meet regional and local needs.

(Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming)

Garth A. Hull, Chief
Educational Programs Branch
NASA Ames Research Center
Mail Stop 204–12
Moffett Field, CA 94035–1000
(415) 604–5543

(Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont)

Richard Crone
Educational Programs
Code 130
NASA Goddard Space Flight Center
Greenbelt, MD 20771–0001
(301) 286–7206

(Colorado, Kansas, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, and Texas)

Dr. Robert W. Fitzmaurice
Center Education Program Officer
Education and Public Services Branch–AP–4
NASA Johnson Space Center
Houston, TX 77058–3696
(713) 483–1257

(Florida, Georgia, Puerto Rico, and Virgin Islands)

Steve Dutczak, Chief
Education Services Branch
Mail Code PA–ESB
NASA Kennedy Space Center
Kennedy Space Center, FL 32899–0001
(407) 867–4444

(Kentucky, North Carolina, South Carolina, Virginia, and West Virginia)

Marchelle Canright
Center Education Program Officer
Mail Stop 400
NASA Langley Research Center
Hampton, VA 23681–0001
(804) 864–3313

(Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin)

Jo Ann Charleston, Acting Chief
Office of Educational Programs
NASA Lewis Research Center
21000 Brookpark Road, Mail Stop 7–4
Cleveland, OH 44135–3191
(216) 433–2957

(Alabama, Arkansas, Iowa, Louisiana, Missouri, and Tennessee)

JD Horne
Director, Executive Staff
Mail Stop DX01
NASA Marshall Space Flight Center
Marshall Space Flight Center, AL 35812–0001
(205) 544–8843

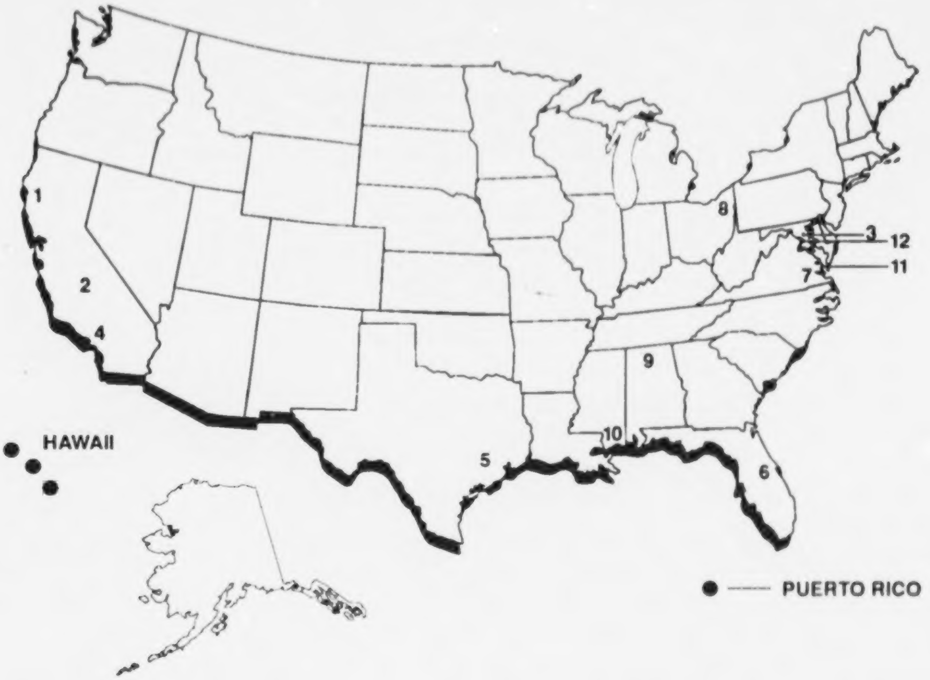
(Mississippi)

Dr. David Powe, Manager
Educational Programs
Mail Stop MA00
NASA John C. Stennis Space Center
Stennis Space Center, MS 39529–6000
(601) 688–1107

(Serves inquiries related to space and planetary exploration and other JPL actvities.)

Dr. Fred Shair, Manager
Educational Affairs Office
Jet Propulsion Laboratory
4800 Oak Grove Drive, Mail Code 183–900
Pasadena, CA 91109–8099
(818) 354–8251

NASA HEADQUARTERS AND FIELD CENTERS



1. **Ames Research Center, Moffett Field, California**, contributes to the U.S. space program in the areas of space science, life sciences, and space technology.
2. **Dryden Flight Research Facility, Edwards Air Force Base, California**, is the Nation's premier aeronautical flight test facility and the landing site for many Space Shuttle missions.
3. **Goddard Space Flight Center, Greenbelt, Maryland**, is a unique national facility where hundreds of scientists, engineers, and technicians work together to design, develop, fabricate, test, launch, and track spacecraft; operate flight projects; and analyze data.
4. **Jet Propulsion Laboratory, Pasadena, California**, has as its primary focus the scientific study of the solar system and the exploration of the planets with automated spacecraft.
5. **Lyndon B. Johnson Space Center, Houston, Texas**, is the focal point for NASA's manned space flight program. Johnson has been "Mission Control" for all manned space flights since *Gemini 4* in 1965.
6. **John F. Kennedy Space Center, Cape Canaveral, Florida**, is the primary launch site for manned and unmanned space vehicles. Situated on a national wildlife refuge, it is the NASA Field Center where rockets and their payloads are inspected, prepared, and launched.
7. **Langley Research Center, Hampton, Virginia**, focuses primarily on aeronautical research. The Center currently devotes two-thirds of its programs to aeronautics and the remainder to space research.
8. **Lewis Research Center, Cleveland, Ohio**, conducts a varied program of research in aeronautics and space technology. Aeronautics research at Lewis includes work on advanced materials and structures for aircraft. Space-related research focuses primarily on power and propulsion.
9. **George C. Marshall Space Flight Center, Huntsville, Alabama**, is the primary propulsion system center for NASA. Its rockets sent the first Americans into space, landed men on the moon, launched Skylab, and lifted the Space Shuttle into orbit.
10. **John C. Stennis Space Center, Mississippi**, is NASA's prime test facility for large liquid propellent rocket engines and propulsion systems. Stennis is also responsible for research programs in environmental sciences and remote sensing of Earth's resources.
11. **Wallops Flight Facility, Virginia**, is a special facility for suborbital research, operated by Goddard Space Flight Center.
12. **NASA Headquarters, Washington, D.C.**, oversees agency programs.

NATIONAL SCIENCE FOUNDATION

Education in science and mathematics involves a chain of links from preschool through K–12, to undergraduate and graduate study, and a parallel chain of informal learning experiences. All the links must be strong. Education must stimulate the interests of all students, indeed of all citizens, so as to ensure that the Nation will have the science and technology workforce including scientists and engineers it needs in the years ahead and the scientifically literate citizenry that our democracy will require as we enter the 21st Century. In its education programming, the Foundation reaches out to all—not just to those who may become the scientists and engineers of tomorrow.

Luther S. Williams
Directorate for Education and
Human Resources,
National Science Foundation

MISSION

The National Science Foundation (NSF) was established to promote and advance scientific progress in the United States. The Foundation has a legislative mandate to initiate and support basic science and engineering research, with the dual objective of strengthening research potential and education programs at all levels. While the Foundation itself does not conduct such research, it sponsors research and education in science and engineering.

BACKGROUND

The National Science Foundation is an independent Federal agency, established in 1950. Policymaking authority within the agency is vested in the National Science Board, which is composed of scientists, educators, and public affairs experts. Its 25 members are appointed by the President with the consent of Congress.

NSF provides funding for research and education in the sciences and engineering. However, the Foundation does not support clinical research. Most proposals are initiated by educational institutions and other organizations rather than from individuals. Although NSF does not conduct research, more than one-half of its professional staff are scientists and engineers—60 percent on temporary assignment as visiting scientists and Inter-Program Assignees. These individuals oversee the disbursement of funds through seven directorates within the Foundation: Biological Sciences; Computer and Information Science and Engineering; Education and Human Resources; Engineering; Geosciences; Mathematical and Physical Sciences; and Social, Behavioral, and Economic Sciences.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

The National Science Foundation Act of 1950 authorizes and directs the Foundation to initiate and support education programs in virtually all fields of science and engineering, at all educational levels. Each year, NSF submits to Congress an updated 5-year strategic plan for science and engineering education. The plan simultaneously addresses short-term objectives that benefit the students currently in the system and long-term goals that result in fundamental changes to the basic delivery of education.

Elementary and Secondary

NSF places a major emphasis on elementary and secondary science and mathematics education, with the objectives of attracting and sustaining the interest of all students in these fields, as well as improving the quality of instruction for all students. The Foundation is actively involved in the support of national systemic reform efforts in science and mathematics curricula that emphasize comprehensive, integrated approaches to teaching and learning. NSF's highest priority in terms of funding currently is the enhancement of teachers' content and pedagogical knowledge in science, mathematics, and technology, especially at the elementary level, and systemic reform initiatives.

Higher Education

NSF provides leadership and leveraged project support for the Nation's higher educational system of technical colleges, 2- and 4-year colleges, and comprehensive and research universities. NSF programs seek to engage all undergraduate students in the learning of science and mathematics—those who will be engineers and scientists or skilled technicians in our workforce; teachers of science and mathematics in our schools; leaders of business, the professions, and government; and, in every case, citizens in an increasingly technology-based society.

At the graduate level and beyond, the Foundation's activities concentrate principally in two directions: (1) support for outstanding graduate students to ensure a steady flow of high-ability students through the education and research training systems, and (2) support for postdoctorals and young faculty to attract beginning professionals to academic careers and provide them with critical study and research opportunities in their formative years.

Public Understanding of Science

The Foundation supports projects that provide rich and stimulating environments outside of school, where individuals of all ages, interests, and backgrounds can increase their appreciation and understanding of science and mathematics and their applications.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

The Directorate for Education and Human Resources is the primary unit for education programs within NSF, and is funded by Congress through separate appropriation. All NSF research-related directorate units, however, actively participate in the educational activities that are coordinated through the Directorate.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Directorate for Education and Human Resources

The Directorate for Education and Human Resources coordinates all education programs within the National Science Foundation.

Luther S. Williams, Director
Directorate for Education and
Human Resources
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1600

Division of Elementary, Secondary, and Informal Education

The Division of Elementary, Secondary, and Informal Education provides the foundation for NSF reform efforts in science, mathematics, and technology education, prekindergarten through grade 12. Its programs provide quality educational experiences for all students in classroom settings, and increase opportunities for all individuals to explore science, mathematics, and technology through museum exhibits, the media, and community activities. Division programs include instructional materials development, inservice teacher education and career recognition, advanced technological training (a program jointly managed with the Division of Undergraduate Education), informal science education, and research experiences for high-potential and high-ability youth.

Margaret B. Cozzens, Division Director
Division of Elementary, Secondary, and
Informal Education
National Science Foundation, Room 885
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1620

Division of Graduate Education and Research Development

The Division of Graduate Education and Research Development promotes the early career development of scientists, mathematicians, and engineers by providing for fellowships and traineeships, and by helping to advance the careers of young faculty in science, mathematics and engineering.

Terence L. Porter, Division Director
Division of Graduate Research and
Research Development
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1630

Division of Human Resource Development

The Division of Human Resource Development (HRD) at NSF works to broaden the participation of persons from underrepresented groups in science, engineering, and mathematics. HRD programs focus on making comprehensive and systemic changes in the education and research training of minorities, women, and persons with disabilities from precollege to graduate education.

Roosevelt Calbert, Division Director
Division of Human Resource Development
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1640

Division of Research, Evaluation, and Dissemination

The Division of Research, Evaluation, and Dissemination supports research, statistical studies, and evaluations of all science, mathematics, engineering, and technology education in EHR. In addition, the division prepares a biennial indicators report on all levels of science and mathematics education; supports dissemination of EHR programs and project results; funds research in advanced educational technology, teaching, and learning; and provides networking, analytical, and policy support in these critical areas.

Daryl E. Chubin, Division Director
Division of Research, Evaluation, and
  Dissemination
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1650

Division of Undergraduate Education

The Division of Undergraduate Education serves as the focal point for the National Science Foundation's agency-wide effort in undergraduate education. The programs in this division support course and curriculum development, instrumentation and laboratory improvement, undergraduate faculty enhancement, undergraduate preparation of future elementary and secondary science and mathematics teachers, and advanced technological education for the technical workforce.

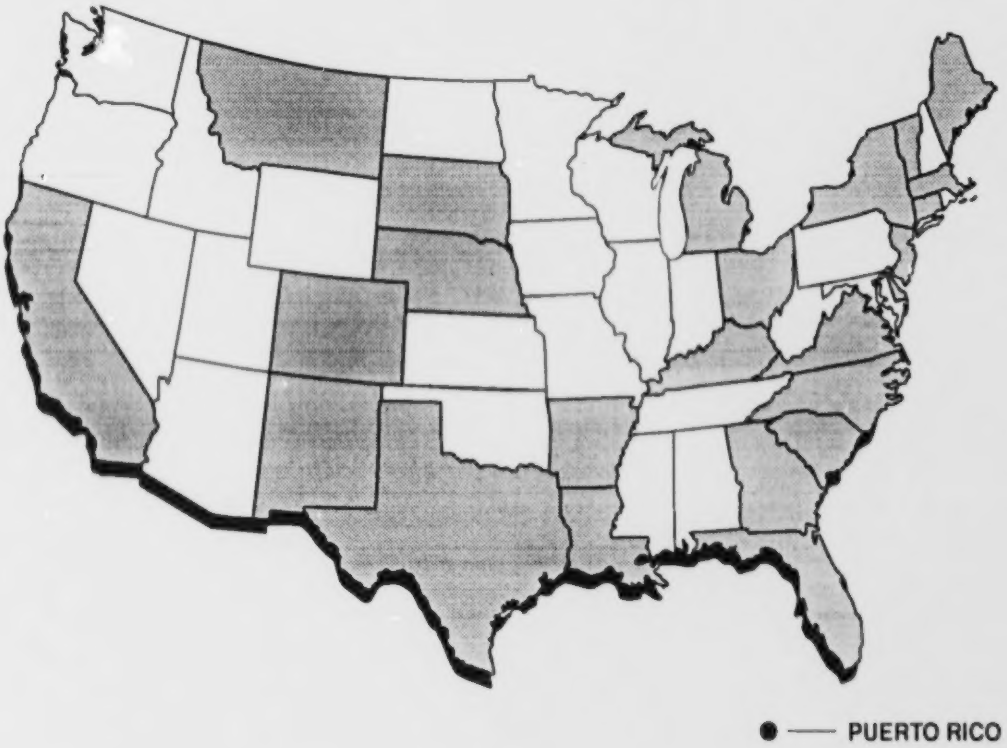
Robert F. Watson, Division Director
Division of Undergraduate Education
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1670

Office of Systemic Reform

The Office of Systemic Reform is an active partner in efforts to improve mathematics and science education and academic research competitiveness in selected States, cities, and rural areas.

Joseph G. Danek, Office Director
Office of Systemic Reform
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1690

NATIONAL SCIENCE FOUNDATION
STATEWIDE SYSTEMIC INITIATIVES



The National Science Foundation established the Statewide Systemic Initiatives (SSI) Program to encourage improvement in mathematics, science, engineering, and technology education through comprehensive systemic changes in State education systems. Currently, 24 States and 1 Territory, highlighted above, have been awarded competitive grants from this program. For more information about individual State initiatives, see the State Highlights section of this publication.

State Systemic Initiatives grant recipients:

Arkansas
California
Colorado
Connecticut
Delaware
Florida
Georgia
Kentucky
Louisiana
Maine
Massachusetts
Michigan
Montana
Nebraska
New Jersey
New Mexico
New York
North Carolina
Ohio
Puerto Rico
South Carolina
South Dakota
Texas
Vermont
Virginia

SMITHSONIAN INSTITUTION

> *We hear a lot these days about literacy, but we should recognize that it is a moving target. Cultural literacy without a significant and growing component of scientific and technological literacy is, for our era, as unimaginable as our civilization is without its scientific and technological aspirations and underpinnings.*
>
> Robert McC. Adams
> Secretary of the Smithsonian

MISSION

The Smithsonian Institution is a trust instrumentality of the Federal Government, established to increase and diffuse knowledge. While the Institution receives Federal support for its operation, it has no government or regulatory functions and serves, in effect, as an independent agency.

BACKGROUND

The Smithsonian Institution was founded in 1846. Although it is best known for its 14 museums and the National Zoo, the Smithsonian is also one of the country's premier research facilities. In addition to its federally funded programs, the Institution has many privately funded activities.

ROLE IN MATHEMATICS AND SCIENCE EDUCATION

As part of its mandate to increase and diffuse knowledge, the Smithsonian Institution considers science education to be one of its most important missions.

Elementary and Secondary Education

In recent years, the Institution has focused on assisting school systems in addressing the national crisis in science and mathematics education. Three areas receiving particular attention, both in the museums and in other Smithsonian bureaus, have been professional education for teachers, curriculum materials for schools, and programs to effect attitudinal changes about science.

Higher Education

Through internships and fellowships the Institution provides individualized training in science for undergraduate and graduate students. Smithsonian programs for those individuals studying astrophysics and biology are especially outstanding.

Public Understanding of Science

Through educational outreach programs, the Smithsonian Institution can improve science literacy among the general public. The museums inform and educate visitors through special exhibits, onsite demonstrations, and publications.

HOW MATHEMATICS AND SCIENCE EDUCATION PROGRAMS ARE ADMINISTERED

Each administrative division within the Smithsonian is responsible for its own education programs, and each museum has an education office that reports to the museum director. The Institution's Office of Elementary and Secondary Education is the central office for precollege education.

ADMINISTRATIVE OFFICES FOR MATHEMATICS AND SCIENCE EDUCATION

Office of Elementary and Secondary Education

The Office of Elementary and Secondary Education serves as the focal point for formulating pan-Institutional policies and goals for education. The Office draws on resources from across the Institution to create materials and programs designed to meet the needs of teachers and students in schools in the Washington, D.C., area and nationwide. The Office also serves as an information clearinghouse for Smithsonian educational materials and programs.

Ann I. Bay, Director
Elementary and Secondary Education
Smithsonian Institution
Arts and Industries Building, Room 1163
Washington, DC 20560
(202) 357–2425/Fax: (202) 357–2116

Harvard-Smithsonian Center for Astrophysics

The Smithsonian Astrophysical Observatory coordinates its varied scientific programs with the Harvard College Observatory, and together the two observatories form the Harvard-Smithsonian Center for Astrophysics in Cambridge, Massachusetts. The Science Education Department at the Center currently manages eight projects, all funded by the National Science Foundation, with additional support from the Smithsonian Institution. These projects address the needs of teachers and students in elementary, secondary, and college science education through advanced technology, curricula and materials, teacher enhancement, and teacher networks.

Hal Coyle, Science Education Department
Harvard-Smithsonian Center for Astrophysics
60 Garden Street, MS71
Cambridge, MA 02138
(617) 495–8798/Fax: (617) 496–5405

National Air and Space Museum

The National Air and Space Museum serves as a major educational center, which the public can easily access to learn about the history and development of aeronautics, Earth and planetary sciences, astronomy, astrophysics, and related areas of the arts, humanities, and sciences. Particular emphasis is given to the social implications of the museum's collections and research on the quality of life for humankind.

Jacqueline Grazette, Assistant Director
Educational Services Department, MRC 305
National Air and Space Museum
Washington, DC 20560
(202) 786–2524/Fax: (202) 786–2262

National Museum of Natural History/ Museum of Man

The National Museum of Natural History/Museum of Man houses the world's largest and most valuable assemblage of natural history specimens and human artifacts. It is the largest research organization in the Smithsonian, and at the college level the museum has a large internship program. Through its many exhibits, educational programs and scholarly and popular publications, the Museum disseminates knowledge about the world's natural and cultural diversities.

Laura McKie, Assistant Director for Education
National Museum of Natural History
10th Street and Constitution Avenue NW., MRC 158
Washington, DC 20560
(202) 357–2066/Fax: (202) 786–2778

National Science Resources Center

Operated jointly by the Smithsonian Institution and the National Academy of Sciences, the National Science Resources Center's mission is to improve the teaching of science in the Nation's schools. The Center's work is in three principal program areas: national outreach to build consensus, dissemination of information, and development of innovative science curriculum materials.

Douglas Lapp, Executive Director
National Science Resources Center
Smithsonian Institution/MRC 403
Washington, DC 20560
(202) 357–2555/Fax: (202) 786–2028

National Zoological Park

The National Zoological Park maintains a living collection at the Zoo and a major conservation, animal breeding, and research facility in Virginia. Through programs in education, research, conservation, and animal health, the Park promotes understanding of animal adaptations and evolution, and the interaction of wildlife with the environment and human culture. Through a series of new exhibits, programs, and graphics, the Zoo is transforming the Park into a biological park to educate the public about life in all of its forms and all its connections.

David Jenkins, Associate Director for Interpretive Programs
National Zoo/Education Department
Connecticut Avenue NW.
Washington, DC 20008
(202) 673–4919/Fax: (202) 673–4607

Smithsonian Environmental Research Center

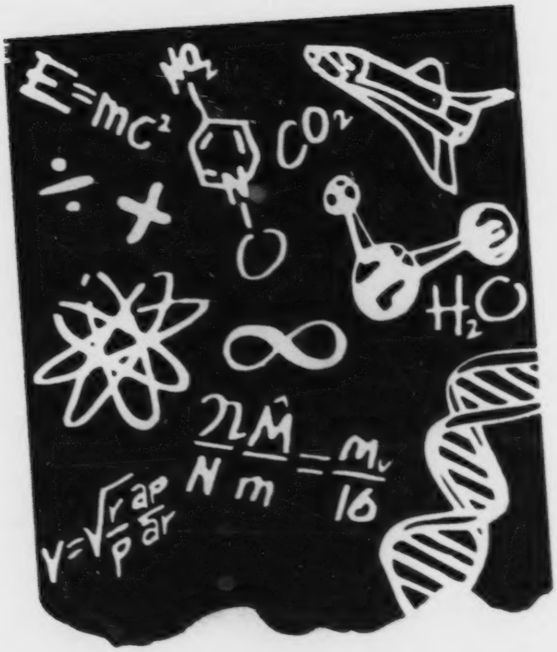
The Smithsonian Environmental Research Center conducts long-term scientific research on estuarine land and water ecosystems found in the Chesapeake Bay watershed. The Center disseminates the results of its research through scientific journals, national and international meetings and seminars, the training of scientists, and public education activities for adults, families, and students (K–12).

A. Mark Haddon, Education Director
Smithsonian Environmental Research Center
P.O. Box 28
Edgewater, MD 21037
(301) 261–4190/Fax: (301) 261–7954

Smithsonian Tropical Research Institute

The Smithsonian Tropical Research Institute conducts basic research on the ecology, behavior, and evolution of tropical organisms. Headquartered in Panama, the Institute carries out research throughout the tropics and is the custodian of the Barro Colorado Nature Monument, a 12,000-acre tropical nature preserve located along the Panama Canal. Other facilities include a cloud-forest station, a research vessel, marine laboratories on the Atlantic and Pacific oceans, and a research library.

Georgina DeAlba
Smithsonian Tropical Research Institute
P.O. Box 2072
Balboa, Republic of Panama
011–507–27–4918/Fax: 011–507–32–5978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SECTION TWO

NATIONAL PROGRAMS FOR ELEMENTARY AND SECONDARY EDUCATION

BEST COPY AVAILABLE

U.S. DEPARTMENT OF AGRICULTURE (USDA)

4–H Youth Development

The 4–H Youth Development Programs under the Cooperative Extension Service offer opportunities for sparking interest in mathematics and science among American youth, and complement classroom education with informal, experiential education in community settings. Approximately 6 million youth, ages 5–18, participate in school enrichment, clubs, and special events. The 4–H organization receives substantial support from volunteers and private-sector contributors. The State Highlights section of this publication provides information on 4–H State activities.

National Program Leader
Science and Technology
Room 3860, South Building
USDA Extension Service
Washington, DC 20250–0900
(202) 720–5516/Fax: (202) 720–9366

4–H/Honda Mentorship Project

The 4–H/Honda Mentorship Project provides an opportunity for teams of teenagers to work with adult mentors in hands-on problemsolving experiences in engineering at Honda's technical training sites across the country. The curriculum includes working as a team and managing time and resources to solve science-related problems.

Director, National 4–H Council
7100 Connecticut Avenue NW.
Chevy Chase, MD 20815
(301) 961–2853

4–H Missions in Space

The 4–H Missions in Space Program, a partnership between National 4–H and the Alabama Space Science Exhibit Commission, encourages youth to attend the Space and Rocket Center in Alabama and the Astronaut Hall of Fame in Florida. Space Camp allows students to participate in a variety of science and technology activities. Scholarships are available to assist underrepresented youth.

Extension 4–H Specialist, ACES–4–H
211 Duncan Hall
Auburn University, AL 36849–5620
(205) 844–2233

4–H Regional Leadership Centers

Designed to complement the Network for Action in Science and Technology, Regional Leadership Centers train community-based teams in nonformal science education and are responsible for keeping these teams up to date on new programs. Regional Centers are currently operating in California, Georgia, Missouri, and New York.

4–H Specialist
Agriculture and Natural Resources
University of California at Davis
Davis, CA 95616
(916) 752–8824

National Network for Action in
Science/Technology
Coordinator
6H Berkey Hall
Michigan State University
East Lansing, MI 48824–1117
(517) 355–0180

4–H Science Experience and Resources for Education Settings (SERIES)

The national 4–H SERIES Program increases both the quantity and quality of science experiences available to students in a way that promotes a greater understanding of science. SERIES trains teenagers as science coaches for youth ages 9–12. Teens also work under the mentorship of practicing scientists and explore possible career opportunities in science and technical fields and participate in community service. Training for SERIES is conducted through the four Regional Leadership Centers.

Project Director, 4–H SERIES
Division of Agriculture and Natural Resources
University of California at Davis
300 Lakeside Drive
Davis, CA 95616
(916) 752–8824

Ag in the Classroom

The Ag in the Classroom Program helps students gain a greater understanding of agriculture's role in the economy and society, and informs students about career opportunities in the food and agricultural sciences. While the Department of Agriculture provides national leadership, each State develops its own programs in cooperation with agribusiness, education, and government. Information about State programs is available through the Washington, D.C., office. The State Highlights section of this publication lists State leaders for this program.

Director, Ag in the Classroom
U.S. Department of Agriculture
Room 317–A, Administration Building
Washington, DC 20250–0991
(202) 720–5727/Fax: (202) 720–1767

Black Emphasis Program

The Black Emphasis Program develops academies that focus on African-American males at the middle school level. The academies provide students with early science experiences, mentors, and role models to enhance self-confidence and to develop an interest and desire to achieve in science-related fields. Academies are funded through two Historically Black Colleges and Universities.

Black Emphasis Program Manager
U.S. Department of Agriculture
1322 South Building
Washington, DC 20250–1322
(202) 720–2019/Fax: (202) 690–2345

Infusing Aquaculture Into Agriculture Education

Through congressional appropriations in 1990–1994, USDA initiated a pilot program, Infusing Aquaculture Into Agriculture Education, to develop materials, conduct field tests, and provide training in aquaculture for selected teachers across the country. The 1,100-page, 5-volume curriculum is proving valuable in teaching high school students the principles of science and mathematics related to aquatic organisms. The program is being adapted by some schools for middle and elementary students.

Grants Program Manager
Office of Higher Education Programs
Cooperative State Research Service
U.S. Department of Agriculture
Aerospace Building, Room 310–E
901 D Street SW.
Washington, DC 20250–2251
(202) 401–1790

National Network for Action in Science and Technology

The National Network creates a stronger link of land-grant colleges and universities that provide technical assistance to the federally funded Children, Youth and Families at Risk sites. The Network provides trainers with the information and skills necessary to return to their local communities and train others to implement science and technology curricula and processes. In addition, trainers learn how to recruit participants, promote programs, and establish advisory and planning groups.

National Network for Action in
Science/Technology
Coordinator
6H Berkey Hall
Michigan State University
East Lansing, MI 48824–1117
(517) 355–0180

Research Apprenticeship Program

The Research Apprenticeship Program provides summer employment in university and Federal research laboratories for high school students having strong mathematics and science aptitude. One-fourth of the students receive Federal support; the remainder are supported by State and private funds leveraged by the Federal partner. Many research apprentices are females or minorities. Participants interact directly with scientists at USDA laboratories and gain valuable experience in agricultural science.

Special Programs Manager
U.S. Department of Agriculture
Agricultural Research Service
Administration Building, Room 337–A
14th Street and Independence Avenue SW.
Washington, DC 20250–0300
(202) 720–6161/Fax: (202) 690–0109

Research Apprenticeship Program for Minority High School Students

The Research Apprenticeship Program for Minority High School Students provides not only summer employment for minority high school students having strong scientific aptitude, but also the opportunity to interact with research scientists and gain first-hand experience in a research environment at selected university laboratories.

Coordinator, 1890 Programs
Cooperative State Research Service
U.S. Department of Agriculture
AG Box 2210, Suite 329–C, Aerospace Center
Washington, DC 20250–2210
(202) 401–5620/Fax: (202) 401–1706

SPACES: Preparing Kids for a High Tech and Global Future

SPACES is an informal hands-on community-based science education program that prepares students for a global and high-tech society. This programming framework shows how to set up a science education program for children ages 5–14, and involves community scientists, technicians, and others with science and technology expertise. The program focuses on aerospace, the environment, and relationships with oneself and others. Extensive curriculum support is available.

Michigan 4–H Youth Programs
Michigan State University
6H Berkey Hall
East Lansing, MI 48824–1111
(517) 355–0180

Teachers' Research Fellowship Program

The Teachers' Research Fellowship Program offers temporary employment to mathematics, biology, or physical science teachers at the junior or senior high school level. Teachers work under an Agricultural Research Service scientist on specific research problems tailored for completion within a given time period. The program provides teachers with first-hand agricultural and food-related research experience that can be transferred to students in the classroom.

Special Programs Manager
Agricultural Research Service
U.S. Department of Agriculture
14th Street and Independence Avenue SW.
Administration Building, Room 337–A
Washington, DC 20250–0300
(202) 720–6161/Fax: (202) 690–0109

Youth Conservation Corps

The Youth Conservation Corps is a summer employment program offered by the Departments of Agriculture and the Interior. Students, ages 15–18, work on projects to further the development and conservation of U.S. natural resources. Work projects are planned, directed, and executed to give the enrollees an understanding of their tasks and how their work contributes to environmental enhancement.

Director, Human Resources Programs
U.S. Department of Agriculture
Forest Service
P.O. Box 96090
Washington, DC 22209
(703) 235–8834

Youth Enrichment Program

The Youth Enrichment Program, sponsored by the Agricultural Research Service, provides first-hand science experience for more than 100 high school students in the mid-Atlantic region who are interested in attending college and pursuing science careers.

Special Programs Manager
Agricultural Research Service
U.S. Department of Agriculture
14th Street and Independence Avenue SW.
Administration Building, Room 337–A
Washington, DC 20250–0300
(202) 720–6161/Fax: (202) 690–0109

U.S. DEPARTMENT OF COMMERCE (DOC)

The GLOBE Program

The National Oceanic and Atmospheric Administration (NOAA) is the lead agency for the GLOBE Program (Global Learning and Observations to Benefit the Environment), an international environmental education and science partnership. Vice

President Gore first initiated this program with his book, *Earth in the Balance*, in which he stated, "I propose a program that will use school teachers and their students to monitor the entire Earth." GLOBE is a public/private partnership to establish a network of K–12 (or equivalent) students throughout the world. Students will make environmental observations, share the resulting environmental world views with each other, and provide data useful to environmental scientists. Working on a 10-year time scale, GLOBE expects to include at least 200 schools worldwide by Earth Day 1995 (April 25), and more than 100,000 schools by the Year 2000. Led by Vice President Gore, the GLOBE Leadership Council includes the heads of the Office of Science and Technology Policy, the Office on Environmental Policy, NOAA, the National Aeronautics and Space Administration, the Environmental Protection Agency, and the National Science Foundation, as well as the Deputy Secretary of the Department of Education and the Under Secretary of State for Global Affairs.

Thomas N. Pyke, Jr., Director
The GLOBE Program
744 Jackson Place
Washington, DC 20503
(202) 395–7600/Fax: (202) 395–7611

National Sea Grant College Program

Established in 1966 and administered by the National Oceanic and Atmospheric Administration (NOAA), this program combines the resources of the Federal Government with those at universities to develop and analyze the Nation's marine resources through research, education, and outreach. Grant proposals are reviewed and grants are normally awarded on an institutional basis through the Sea Grant college or institution designated in each coastal State. It is the Sea Grant colleges that provide research opportunities for scientists and education for the general public about marine resources. NOAA's Sea Grant College Office's divisions are living resources, nonliving resources, technology and commercial development, environmental studies, and human resources.

Director, National Sea Grant College Program
SSMC3, Room 11843
1315 East West Highway
Silver Spring, MD 20910
(301) 713–2431/Fax: (301) 713–0799

U.S. DEPARTMENT OF DEFENSE (DOD)

Junior Science and Humanities Symposia (JSHS) Program

The Junior Science and Humanities Symposia Program promotes scientific research and experimentation in secondary schools and recognizes students for their original research achievements. Forty-seven regional symposia are held during each academic year on university campuses across the Nation, at which participating secondary students and teachers may interact with distinguished scientists and humanists on current research topics and may subsequently observe research in progress through tours of research laboratories. University scholarships and other donated awards are available to students who submit and orally present original research projects to each regional symposium. The U.S. Army awards regional winners with an expense-paid trip to the annual national symposia, where it also awards a grant to the teacher and school of the national winner. Nomination and application packages are available by request from the Academy of Applied Science.

Junior Science and Humanities Symposia
National Office
Academy of Applied Science
98 Washington Street
Concord, NH 03301
(603) 228–4520

National Science Center

The National Science Center, with its multifaceted programs, is designed to increase interest in science, mathematics, and technology among students, improve the skills of teachers, and provide mathematics and science education support in the classroom. The Center offers hands-on workshops/camps for students and teachers nationwide in science, mathematics, electronics, and computers. Portable planetariums for instruction in space science, astronomy, geography, and biology are available on loan to teachers who have been certified through the Center's comprehensive training program. In addition, the National Science Center operates a Discovery Center that offers school groups and the general public interactive experiences with scientific exhibits. The

Center operates mobile versions of the Discovery Center that travel nationwide. The National Science Center also reaches out nationally with satellite teleconference programs on science education. Finally, the Center offers a Science-by-Mail program that encourages a pen pal relationship between students and scientists.

National Science Center
Attention: ATZH–NSC–D
Building 25722
Fort Gordon, GA 30905–5689
(706) 791–7621

Naval Science Awards Program

The Navy and Marine Corps participate each year in regional, district, and State science and engineering fairs in the United States and its territories that exhibit various projects submitted by high school students in grades 9–12. At each participating fair, four students whose projects are considered to demonstrate excellence in any field of endeavor—not necessarily military or nautical—are designated as first place Navy/Marine Corps Distinguished Achievement Award winners. These four students receive a certificate, a programmable scientific calculator, and an invitation to submit a written report of their winning project to the National Naval Science Awards Program Competition held each May. Approximately 25 winners of this competition are awarded scholarships and science-oriented trips. The Navy and Marine Corps also participate in the annual International Science and Engineering Fair (ISEF), sponsored by Science Service, Inc., awarding scholarships in each of the scientific disciplines. Award recipients must be citizens of the United States or its territories at the time of their selection.

Project Officer
Naval Science Awards Program
Office of Naval Research (353)
800 North Quincy Street
Arlington, VA 22217–5660
(703) 696–5787
(800) 422–6727

Navy Community Service Program

The Navy Community Service Program (NCSP) is a nationwide nonfunded program that encourages Navy military and civilian employees to volunteer their time and knowledge to help educate youth and improve the quality of life of America's citizenry. NCSP fosters partnerships between the Navy and public- and private-sector organizations. The Navy currently participates in several hundred volunteer-oriented partnerships, which include tutoring, mentoring, and other community-based school projects. These projects are geared toward, but not limited to, fortifying student skills in mathematics, science, engineering, and environmental conservation. See the State Highlights section of this publication for local NCSP offices.

Navy Community Service Program
Bureau of Naval Personnel
Pers-6CSP
2 Navy Annex, Room 1809
Washington, DC 20370–6277
(703) 614–1290

Research and Engineering Apprenticeship Program (REAP)

The Research and Engineering Apprenticeship Program provides minority and economically disadvantaged high school students with a cooperative education experience designed to introduce rewarding career opportunities in science and mathematics. During the apprenticeship, students are involved in hands-on experiences in research and development while working with university mentors who provide daily guidance.

Center for Education and Development
Academy of Applied Science
98 Washington Street
Concord, NH 03301
(603) 228–4530

Undergraduate Training Program

This program, developed particularly for minority high school students, provides full tuition to any university or college for outstanding students who plan to major in electrical or computer engineering, computer science, mathematics, or selected languages. Recipients are guaranteed summer employment during school and permanent employment within the National Security Agency upon graduation. Program participants are required to work for the National Security Agency after graduation for at least one and a half times their length of study.

National Security Agency
Undergraduate Training Program
Attention: M3222 (UTP)
Fort Meade, MD 20755–6000
(410) 859–4590
(800) 962–9398

U.S. Army Summer Associateship for High School Science and Mathematics Faculty Program

Through this program sponsored by the Department of the Army through the U.S. Army Research Office, a limited number of outstanding high school teachers are exposed to research at Army laboratories and centers located across the country. Associateships are awarded for periods of up to 10 weeks.

Battelle–HSSMF
P.O. Box 12297, 200 Park Drive
Research Triangle Park, NC 27709–2297
(919) 549–8291, ext. 28

U.S. DEPARTMENT OF EDUCATION (ED)

Blue Ribbon Schools Program

The Blue Ribbon Schools Program identifies and gives national recognition to public and private schools that are unusually effective in meeting national, State, and local goals and in educating their students. The program honors schools that show outstanding effectiveness in leadership, organizational vitality, teaching environment, curriculum and instruction, student environment, and parent and community support. To be recognized as a national school of excellence, the school must have unusually strong programs in all areas of school life. Elementary schools and secondary schools are recognized in alternate years.

In addition, recognized schools that also have model programs in specific areas receive special honors. The 1994–95 secondary program is placing emphasis on parent involvement and technology.

Lois Weinberg
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208–5645
(202) 219–2149

Christa McAuliffe Fellowship Program

The Christa McAuliffe Fellowship Program is a federally funded formula grant program to State education agencies (SEAs) to establish a national fellowship program for outstanding teachers who have 8 or more years of teaching experience. Each SEA conducts Christa McAuliffe Fellowship activities and awards fellowships to Christa McAuliffe Fellows to enable and encourage them to continue their education; to consult with or assist other school districts or private school systems; to develop special innovative programs, projects, or partnerships that involve the business community and the schools; to develop programs that incorporate the use and sharing of technologies to help students learn; or to expand or replicate model programs of staff development. Contact the Chief State School Officer in your State for information on these fellowships.

Jimmie Lue Holmquist
School Improvement Programs
Office of Elementary and Secondary Education
U.S. Department of Education
400 Maryland Avenue SW.
Portals, Room 4500
Washington, DC 20202–6140
(202) 260–2715

ERIC (Educational Resources Information Center)

ERIC is an international information network that acquires, catalogs, and provides access to educational literature. The ERIC system comprises 16 subject-specific Clearinghouses; a central processing and reference facility; a document reproduction service; AskERIC, a personalized Internet-based service that provides an abundance of electronic resources on the AskERIC Virtual Library, including lesson plans, AskERIC InfoGuides, and more; and ACCESS ERIC, a one-stop contact point for new users of the system. To learn more about ERIC, contact ACCESS ERIC at (800) LET–ERIC.

The ERIC Clearinghouse on Mathematics, Science, and Environmental Education, located at The Ohio State University, acquires, selects, and processes high-quality printed materials (such as reports, curricula and instructional materials, evaluations, and information on programs, practices, and policies) in science, mathematics, and environmental education. The Clearinghouse provides a variety of services and products to help educators, administrators, researchers, and others stay up to date on a broad range of issues. It provides reference and referral services in science and mathematics and maintains partnerships for the exchange of information with numerous other organizations. It also produces publications, bibliographies, ERIC Digests (1–2 page papers on topics of interest), syntheses, and summaries on mathematics and science topics, and compilations of promising programs and practices.

David Haury
ERIC Clearinghouse for Science, Mathematics, and Environmental Education
The Ohio State University
1929 Kenny Road
Columbus, OH 43210–1080
(614) 292–6717
(800) 276–0462

Eisenhower National Clearinghouse

The Eisenhower National Program has awarded a 5-year contract to The Ohio State University to establish the Eisenhower National Clearinghouse for Mathematics and Science Education to improve access to mathematics and science resources for the K–12 education community. The Clearinghouse is developing and maintaining a comprehensive collection and catalog of K–12 curriculum materials. Databases containing the catalog of materials in various formats, text and evaluations of selected materials, and other resources for mathematics and science education will be available online and on CD-ROM.

Len Simutis
Eisenhower National Clearinghouse for Mathematics and Science Education
The Ohio State University
1929 Kenny Road
Columbus, OH 43210–1079
(614) 292–7784/Fax (614) 292–2066
email: info@enc.org

Eisenhower Professional Development Federal Activities Program

Under legislation introduced in 1993, the Eisenhower Program will be expanded to cover all core academic subjects. Passage of the legislation was pending as of summer 1994. The Eisenhower Professional Development Federal Activities Program currently focuses on projects that seek to transform the education system to achieve high standards of student performance through systemic reform. The Eisenhower National Clearinghouse and the Eisenhower Regional Consortia, which are described in this section of the publication, illustrate activities supported by the program. It is anticipated that one discretionary grant competition will be held annually.

Director, Eisenhower Professional Development Federal Activities Program
Office of Educational Research and Improvement
555 New Jersey Avenue NW., Room 500F
Washington, DC 20208–5572
(202) 219–2126/Fax: (202) 219–2106

Eisenhower Professional Development State Grants

Under legislation introduced in 1993, the Eisenhower Program will be expanded to cover all core academic subjects. Passage of the legislation was pending as of summer 1994. The program focuses on teacher enhancement through both inservice and preservice training. Funds flow through the States to local school systems by formula and to institutions of higher education by intra-State competitions. For specific information on your State, contact the Eisenhower Coordinator listed in the State Highlights section.

Christine Jackson
School Effectiveness Division
Eisenhower Professional Development State Grants
Office of Elementary and Secondary Education
U.S. Department of Education
600 Maryland Avenue SW., Portals 4500
Washington, DC 20202–6140
(202) 260–2519

Eisenhower Regional Consortia

The Eisenhower National Program has funded 10 Regional Mathematics and Science Education

Consortia. Working closely with the Clearinghouse, the consortia provide information and technical assistance to help States and school districts provide improved mathematics and science programs. They also train and provide technical assistance to classroom teachers, administrators, and other educators to help them adapt and use exemplary instructional materials, teaching methods, curricula, and assessment tools. A map indicating the regions served by each consortium is found at the end of this section, or see the State Highlights section of this publication for the consortium serving your State.

National Coordinator, Regional Consortia
Office of Educational Research and
Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208–5644
(202) 219–2119

Field-Initiated Research

The Department of Education, through the Office of Educational Research and Improvement, funds diverse research projects proposed by individuals, institutions of higher education, public and private institutions, and agencies. In fiscal year 1994, the Field-Initiated Studies Program awarded 10 such grants, including mathematics and technology projects.

Delores Monroe
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208
(202) 219–2223

Fund for Improvement in Education

The Secretary's Fund for Improvement in Education supports programs and projects that show promise of identifying and disseminating innovative approaches at the elementary and secondary levels. Activities may be carried out directly or through grants and contracts to State education agencies; local education agencies; institutions of higher education; private schools; and other public and private agencies, organizations, and institutions. Most grant awards are made under this general authority for the Improvement in Education Program. In addition, other discretionary programs are authorized. These include Educational Technology, Computer-Based Instruction, Civic Education, and Comprehensive School Health Education. Emphasis is given to projects that design, develop, and implement innovative approaches for helping all students reach high standards of academic performance in core subjects, including mathematics and science.

Jan Anderson
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW., Room 522
Washington, DC 20208–5524
(202) 219–1496

Javits Gifted and Talented Students Education Program

The Javits Gifted and Talented Students Education program funds projects that help schools identify and respond to the education needs of gifted and talented students, especially those who are disadvantaged or handicapped or have limited English proficiency.

Patricia O'Connell Ross
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208
(202) 219–2187

National Assessment of Educational Progress (NAEP)

NAEP has measured the educational achievement of American students for more than two decades. Its 1996 arts, mathematics, and science assessments of 4th, 8th, and 12th graders will feature several testing innovations. The arts assessment will cover music, theatre, dance, and visual art. Students will take not only a written test but will participate in performance tasks as well. In mathematics and science, students will devote more than half their time to "constructed response" questions that may include extended problem-solving. The science assessment will contain a hands-on task for all students, a study of portfolios for 4th and 8th graders, and an assessment of high-achieving 12th graders to determine how good their performance is at this level. The mathematics assessment will measure students' estimating skills and will allow them to use calculators more often than in the past. Results from the 1992 NAEP mathematics assessment are available from the National Center for Educational Statistics at the Office of Educational Research and Improvement.

Gary W. Phillips
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208
(202) 219–1761

National Center for Research in Mathematical Sciences Education

The National Center for Research in Mathematical Sciences Education is 1 of 20 university-based national education research and development centers supported by the Department of Education. The Center is examining the learning and teaching of whole numbers, quantities, algebra, geometry, and statistics. The Center also is examining models of authentic assessment and implementation of reform.

Thomas A. Romberg
National Center for Research in Mathematical
Sciences Education
University of Wisconsin at Madison
Wisconsin Center for Education Research
1025 West Johnson Street
Madison, WI 53706
(608) 263–3406

National Center for Research on Cultural Diversity and Second Language Learning

The National Center for Research on Cultural Diversity and Second Language Learning is 1 of 20 university-based national education research and development centers supported by the Department of Education. The Center addresses the problem of the generally low levels of success in education among linguistically and culturally diverse populations, including low levels of achievement in science and mathematics and subsequent underrepresentation in these fields. The Center is working to improve mathematics learning for diverse students by exploring the use of thematic curriculum and more concrete, instructionally relevant, interactive classroom instruction. The center is also collaborating with the Technical Education Research Center in Cambridge, Massachusetts, to enhance language-minority students' learning in science.

Barry McLaughlin
National Center for Research on Cultural
Diversity and Second Language Learning
University of California at Santa Cruz
Kerr Hall
Santa Cruz, CA 95064
(408) 459–3501

National Center for Research on Teacher Learning

The National Center for Research on Teacher Learning is 1 of 20 university-based national education research and development centers supported by the Department of Education. The Center focuses on how teachers learn to teach and engage students in active learning, leading to greater student understanding of subject matter. Several studies focus on science and mathematics. These include a long-term study of participants in a new NSF-funded elementary teacher preparation program at the University of Michigan; a case study of experienced teachers meeting as a study group over 2 years to improve their teaching of mathematics; an international longitudinal study of how teachers learn to mentor novice teachers, with a focus on mathematics teachers; and a multi-State study tracking teachers' responses to policies emphasizing reform in reading and mathematics curriculum in California, Michigan, and South Carolina.

Robert Floden or Williamson McDiarmid
National Center for Research on
Teacher Learning
Michigan State University
College of Education
116 Erikson Hall
East Lansing, MI 48824–1034
(517) 355–9302

National Center for Science Teaching and Learning

The National Center for Science Teaching and Learning, 1 of the 20 national education research and development centers supported by the Department of Education, is conducting research that will lead to improvements in science teaching and learning. The research is focused on noncurricular, external factors affecting science students and teachers in grades K–12. Among these factors are social and cultural factors; public expectations and societal incentives; school organization, policy, and economic/political forces; new technologies; and integration of mathematics and science. The Center initiates, promotes, and facilitates research and ensures the dissemination of the results to all those interested in science education.

Arthur L. White or Michael M. Klapper
National Center for Science Teaching
and Learning
The Ohio State University
1929 Kenny Road
Columbus, OH 43210–1015
(614) 292–3339

National Diffusion Network (NDN)

NDN is a dissemination system that helps public and private schools, colleges, and other educational institutions improve by sharing successful educational programs, products, and processes. Many of the NDN programs in mathematics, science, and technology education received developmental funding from the National Science Foundation, while others were initially supported by State grants or university research efforts. After rigorous evaluation through the Department of Education's Program Effectiveness Panel (PEP), NDN helps schools introduce the programs into their classrooms through a person-to-person dissemination system implemented by State facilitators, program developers, and certified trainers.

NDN currently disseminates 70 programs in mathematics, science, and technology education. Additional programs are added each year, and some are selected to receive Federal funds for dissemination. NDN's mathematics programs use a variety of tools—from videodiscs to computers to calculators to concrete objects—to help students increase their mathematics achievement. Program offerings include professional development for teachers incorporating manipulatives in cognitive learning settings and a host of other programs using an enlightened view of problem-solving. Science education programs for elementary schools include hands-on and constructivist approaches to science, health and technology, gardening, and zoos. Programs for middle schools include environmental and physical science projects. High school programs include a core of three physics projects.

Luna Levinson
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208–5645
(202) 219–2134

National Education Longitudinal Study of 1988 (NELS:88)

Through its National Education Longitudinal Study of 1988 (NELS:88) the National Center for Educational Statistics is following a sample of 25,000 8th graders on a 2-year cycle. Individual cohort members (including dropouts in the followups) were surveyed in 1988, 1990, and 1992, along with their parents, principals, and teachers. These same cohort members have been resurveyed in 1994, with subsequent followups planned for 1998 and 2004. To allow researchers to examine cognitive growth over time, test data in mathematics, science, reading, and social studies also were collected from cohort members during the base year, first followup, and second followup surveys. Other data collected by NELS:88 include enrollment patterns in mathematics and science courses, student attitudes toward those subjects, and instructional practices used by their mathematics and science teachers.

Jeff Owings
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208
(202) 219–1777

National Science Scholars Program

The National Science Scholars Program recognizes students' excellence and achievement in the physical, life, and computer sciences; mathematics; and engineering by providing scholarships to meritorious graduating high school students and General Education Development (GED) recipients to continue their studies at the postsecondary level. The program provides scholarship assistance up to $5,000 per year for undergraduate study. The amount of the award each year is dependent on available Federal funds. Students must apply to their State Department of Education.

70

Charles Brazil
Division of Higher Education Incentive
Programs
U.S. Department of Education
400 Maryland Avenue SW.
Portals Building, Courtyard Level, Suite C–80
Washington, DC 20202–5329
(202) 260–3257

National Science Standards

The National Research Council of the National Academy of Sciences, with a grant from the Eisenhower National Program, is developing science content standards that will specify what students should be able to learn and do in grades K–12. Teachers and other science educators, scientists, and the general public are extensively involved with the project by reviewing and refining the standards. More than 80 organizations serve as liaisons to the project. Draft content standards will be distributed in late 1994.

Separate working groups, funded by a coalition of other Federal agencies, are developing teaching and assessment standards in close cooperation with working groups that are developing the content standards. A complete set of the final standards—content, teaching, and assessment—is scheduled for dissemination in early 1995. (The National Council of Teachers of Mathematics has already developed mathematics standards that are in use across the country.)

Dr. Angelo Collins, Director
National Science Education Standards Project
National Research Council
2101 Constitution Avenue NW., HA 486
Washington, DC 20418
(202) 334–3417

PATHWAYS: Support for Teacher Networking

Various approaches to using electronic networks as a tool for teacher professional development will be supported. A national conference with teachers and other educators will be held annually. A major grants competition will provide support for model projects, particularly applications of high-performance computing, in support of teacher professional development. In addition, the Department will expand its electronic communications services to the general public and facilitate public access to other online educational resources.

Cheryl P. Garnette
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208–5644
(202) 219–2116
email: cgarnett@inet.ed.gov

Regional Educational Laboratories

The Department of Education, through the Office of Educational Research and Improvement, funds a network of 10 regional educational laboratories, each serving a specific region of the United States, including its territories. The laboratories identify effective teaching techniques and school improvement efforts within their regions, provide technical assistance, and share information with State and local educators through newsletters, research syntheses, conferences, and the electronic media.

As part of their overall program, which is not subject-matter specific, the laboratories have undertaken a new initiative to improve mathematics and science education. They are collecting, analyzing, and synthesizing information about curriculum frameworks, performance assessment methods, and successful mathematics and science programs and practices.

Sue Gruskin
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208
(202) 219–2116

Star Schools Program

The Star Schools Program funds partnerships that use telecommunications and other technologies to improve educational opportunities for students in mathematics, science, foreign languages, literacy skills, vocational education, and other subjects. Services, including programming and equipment, have been provided to schools and communities serving students in both rural and urban areas. A variety of technologies are supported including satellite, fiber optics, compressed video, facsimile, computer networks, and cable.

Cheryl P. Garnette or Joseph Wilkes
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208–5644
(202) 219–2116
email: cgarnett@inet.ed.gov

State Curriculum Frameworks

Fifteen States and the District of Columbia have received Eisenhower National Program grants to help develop and implement K–12 curriculum frameworks for mathematics and science. Awards have been made to Alaska, Arizona, Arkansas, Delaware, the District of Columbia, Florida, Louisiana, Maine, Massachusetts, Michigan, Nebraska, New Jersey, New York, Oregon, Rhode Island, and Wisconsin. The frameworks are intended to ensure that all children study challenging subject material in mathematics and science. Projects will also design and implement new approaches to teacher education and certification appropriate to the frameworks.

Annora Dorsey or Liz Barnes
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW., Suite 500
Washington, DC 20208
(202) 219–2164
email: adorsey@inet.ed.gov

Third International Mathematics and Science Study

The National Center for Educational Statistics will conduct the U.S. portion of the Third International Mathematics and Science Study being carried out by the International Association for the Evaluation of Education Achievement. The study will measure student progress in mathematics and science in more than 40 countries. In 1995, each country will assess 4th-, 8th-, and 12th-grade students and 12th-grade specialists in mathematics and science. The study will measure student proficiency and may include a longitudinal study of learning in 4th and 8th grades, performance assessments, a study of instructional practices, and case studies of key policy issues in education. Teacher, school, home, and societal factors will provide a context in which to gauge student achievement and differences among countries.

Eugene Owen
Office of Educational Research
and Improvement
U.S. Department of Education
555 New Jersey Avenue NW.
Washington, DC 20208
(202) 219–1746

U.S. DEPARTMENT OF ENERGY (DOE)

Council of Energy Resource Tribes (CERT) Teacher and Student Fellowships

DOE, along with the National Renewable Energy Laboratory and the Western Area Power Administration, provides research opportunities for Native American precollege teachers and college students. CERT, in turn, instructs the Laboratory researchers on tribal affairs relating to energy on the reservations and a basic understanding of Native American cultures.

U.S. Department of Energy
Office of Science Education and Technical
Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

Earth Day Poster Contest

This event coincides with the annual celebration of Earth Day. Students across the United States submit their entries through local DOE facilities, and winning posters are submitted to the national competition. To expand school participation, DOE collaborates with the National Association of Elementary School Principals. See the State Highlights section for the DOE facility in your State.

Federal Coordinating Council for Science, Engineering, and Technology (FCCSET) Federal Laboratory Teacher Training Program

FCCSET summer institutes expose teachers to cutting-edge science in specific content areas and show teachers how to incorporate what they have learned into the classroom. Topics include materials, environmental, and agricultural sciences; physics; space; and the oceans. Sessions are conducted across the country with other Federal agencies that participate in FCCSET.

U.S. Department of Energy
Office of Science Education and Technical
Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

Global Climate Change Curriculum

This program helps teachers across the Nation to develop techniques for multidisciplinary teaching related to the carbon dioxide buildup in the Earth's atmosphere.

Lawrence Livermore National Laboratory
P.O. Box 808
Livermore, CA 94550
(510) 424–0567/Fax: (510) 373–0142

Hands-On Universe

This Lawrence Berkeley Laboratory Program makes cutting-edge astrophysics research tools and technologies available to a wide audience. Via microcomputers and electronic networks, participants can request astronomical images created from the Laboratory's professional-grade telescopes.

Lawrence Berkeley Laboratory
One Cyclotron Road
Center for Science and Engineering Education
Building 938C
Berkeley, CA 94720
(510) 486–5325/Fax: (510) 486–6660

High School Science Student Honors Program

Through this honors program, students from each U.S. State and Territory learn about scientific research, instruments, and careers during a 2-week intensive research experience at a DOE facility.

U.S. Department of Energy
Office of Science Education and Technical
Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

High School Student Research Apprenticeship Program

This apprenticeship program enables high school students (minority and females are especially encouraged to apply) to perform laboratory research, attend lectures and seminars, and participate in field activities.

U.S. Department of Energy
Office of Science Education and Technical
Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

Instructional and Educational Materials and Catalogs Distribution

DOE and its research centers produce educational materials designed for use by teachers and students.

Office of Scientific and Technical Information
(OSTI)
P.O. Box 62
Oak Ridge, TN 37831
(615) 576–8401

International Science and Engineering Fair Special Awards

This program awards a DOE laboratory visit and certificate to students who present outstanding energy-related science projects at the annual International Science and Engineering Fair.

U.S. Department of Energy
Office of Science Education and Technical
Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

Lawrence Livermore National Laboratory Elementary School Science Study of Nature (LESSON)

LESSON instructs K–8 teachers in basic science. Participants receive instructional materials, including experiments developed by the Laboratory scientists.

Lawrence Livermore National Laboratory
P.O. Box 808
Livermore, CA 94550
(510) 424–0567/Fax: (510) 373–0142

National Education Supercomputer Program (NESP)

NESP utilizes a Cray Research X-MP supercomputer to stimulate student interest in advanced studies in mathematics and science and to train teachers in these fields. The X-MP connects students, teachers, and school systems to a powerful education and research experience.

Lawrence Livermore National Laboratory
700 East Avenue
P.O. Box 5509
Livermore, CA 94550
(510) 423–9394/Fax: (510) 423–5951

National Geographic KidsNetwork

This innovative telecommunications-based science and geography curriculum offers elementary school teachers hands-on experience in scientific methods, expands cultural and social awareness, and teaches computer technology. The National Geographic Society and DOE in partnership offer training workshops at DOE facilities and their partner sites in the use of the KidsNetwork. The program demonstrates to teachers and students how curriculum study in the classroom relates to the real-world scientific community and provides them with access to practicing scientists.

U.S. Department of Energy
Office of Science Education and Technical Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

National Science Bowl

The annual academic National Science Bowl competition motivates and recognizes outstanding high school students in science. Awards include trips to international science forums.

U.S. Department of Energy
Office of Science Education and Technical Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

National Teacher Enhancement Program (NTEP)

NTEP is a multilaboratory 3-year program for teams of teachers of grades 4–6 at Los Alamos National Laboratory. Participants attend inservice workshops three times during each academic year and a 3-week institute each summer. The focus of the project is science process, and it presents a science immersion experience for teachers that models how real science research is done at a national laboratory.

Los Alamos National Laboratory
P.O. Box 1663 STB/SE, MSF671
Los Alamos, NM 87545
(505) 667–8680/Fax: (505) 665–4092

National Teachers Institute in Materials and Technology

These 2-week summer institutes, developed by Pacific Northwest Laboratory, Battelle, are attended by teams of teachers and administrators. Participants discover the properties of metals, glass and ceramics, composites, and polymers.

Pacific Northwest Laboratory, Batelle
P.O. Box 999, MS K1–66
Batelle Boulevard
Richland, WA 99352
(509) 375–2584/Fax: (509) 375–2576

New Explorers

DOE and Argonne National Laboratory support formal and informal initiatives in conjunction with the Public Broadcasting System's production of "The New Explorers with Bill Kurtis." The program includes student activities, curriculum materials, scientific field trips, and career information that support classroom use of the video. New Explorers partners, which include museums, zoos, national parks, and other DOE facilities, are active across the country developing teacher guides relevant to local environments.

U.S. Department of Energy
Office of Science Education and Technical Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

Partnership for Environmental Technology (PETE)

PETE is a national nonprofit public-private partnership linking the national laboratories, private industry, State and Federal agencies, and professional societies with regional networks of community colleges to deliver curricula for training environmental technicians.

National PETE Program
6601 Owens Drive
Suite 235
Pleasanton, CA 94588
(510) 422–6525

PreFreshman Enrichment Program (PREP)

PREP is located in colleges and universities that have science-based or engineering degree programs. Summer enrichment institutes are conducted for students in grades 6–10 in laboratory work, field trips, tutoring, and counseling.

U.S. Department of Energy
Office of Science Education and Technical Information, ET–3
1000 Independence Avenue SW.
Washington, DC 20585
(202) 586–8949/Fax: (202) 586–0019

Science at Home

Science at Home workshops partner teachers, parents, and students to help improve scientific literacy and to promote scientific curiosity through fun, easy-to-do science activities.

Los Alamos National Laboratory
P.O. Box 1663 STB/SE, MSF671
Los Alamos, NM 87545
(505) 667–8680/Fax: (505) 665–4092

Standard Model of Fundamental Particles and Interactions

DOE, through Lawrence Berkeley Laboratory and the Stanford Linear Accelerator Center, has sponsored production and distribution of this instructional packet to provide teachers with methods for presenting up-to-date ideas on quarks and leptons.

Science Kit & Boreal Laboratories
777 East Park Drive
Tonawanda, NY 14150–6784
(716) 874–6020

Teacher Research Associates (TRAC) Program

TRAC is a competitive summer program that provides an opportunity for teachers of grades 7–12 to increase their awareness and understanding of current science and technology, and receive college credit. Teachers may apply directly to the Associated Western Universities, which administers the program for DOE.

Associated Western Universities
4190 South Highland Drive, Suite 211
Salt Lake City, UT 84124
(801) 273–8900/Fax: (801) 277–5632

Topics in Modern Physics National Institute

This 3-week institute for high school physics teachers at Fermi National Accelerator Laboratory provides a high energy physics research experience, instructional materials, and interaction with the world's foremost particle physicists. Teachers gain the ability to integrate cutting-edge science into their curriculum.

Education Office
Fermi National Accelerator Laboratory
MS 226
P.O. Box 500
Batavia, IL 60510
(708) 840–3092/Fax: (708) 840–8248

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

Frederick Cancer Research and Development Center (FCRDC) Student Internship Program

The FCRDC Student Internship Program provides high school students with an opportunity to work in a research environment and encourages the pursuit of degrees in relevant scientific disciplines.

National Cancer Institute
National Institutes of Health
Director of Extramural Activities
Comprehensive Minority Biomedical Program
6130 Executive Boulevard
Rockville, MD 20892
(301) 496–7344

Minority High School Student Research Apprentice (MHSSRA) Program

MHSSRA has three areas of focus: high school students and inservice and preservice teachers. MHSSRA's 6–8-week apprenticeship program cultivates interest among minority high school students in the biomedical sciences. Students work with local biomedical investigators and learn research procedures, collect and analyze data, help write scientific papers, and deliver presentations at research seminars.

National Center for Research Resources
National Institutes of Health
Biomedical Research Support Program
Westwood Building, Room 848
5333 Westbard Avenue
Bethesda, MD 20892
(301) 594–7947

Minority High School Student Research Apprentice (MHSSRA) Program for Inservice Teachers

The MHSSRA Inservice Program supports the participation of minority teachers or teachers who teach large numbers of minority students in cutting-edge biomedical research. Teachers work with biomedical investigators who are committed to broadening the teachers' scientific knowledge and understanding of technical skills in the hopes that it will transfer into the classroom.

National Center for Research Resources
National Institutes of Health
Biomedical Research Support Program
Westwood Building, Room 848
5333 Westbard Avenue
Bethesda, MD 20892
(301) 594–7947

Minority High School Student Research Apprentice (MHSSRA) Program for Preservice Teachers

The MHSSRA Preservice Program supports the participation of minority undergraduate students interested in a science teaching career in biomedical research while working with local biomedical investigators. The program's intent is to expand teachers' basic scientific knowledge and expose them to research experiences before they enter the classroom.

National Center for Research Resources
National Institutes of Health
Biomedical Research Support Program
Westwood Building, Room 848
5333 Westbard Avenue
Bethesda, MD 20892
(301) 594–7974

National Cancer Institute Student Research Training Program

The primary objective of the National Cancer Institute Student Research Training Program is to provide training and practical experience to highly motivated high school students who work in the National Cancer Institute intramural programs and who are interested in pursuing biomedical research careers. The training program is divided into four areas of research—cancer etiology, prevention and control, treatment, and biology.

National Cancer Institute
National Institutes of Health
Equal Employment Office
Building 31, Room 10A33
9000 Rockville Pike
Bethesda, MD 20892
(301) 496–6266

National Institute of Environmental Health Sciences (NIEHS) Summers of Discovery Environmental Science Education Outreach Program

Summers of Discovery, a program for precollege science teachers and high school through graduate school students who are interested in pursuing careers in the biological sciences, matches participants with volunteer mentors from the intramural program to spend between 2 and 3 months in the mentor's laboratory working on a research project that exposes them to some of the latest biomedical, molecular, and cellular techniques.

National Institute of Environmental
Health Sciences
National Institutes of Health
Summers of Discovery
Attention: Personnel Office
P.O. Box 12233/RTP.NC 2NN09
Research Triangle Park, NC 27709
(919) 541–4265

National Institutes of Health Science Education Academy

High school science teachers are invited to join with the Office of Education staff and National Institutes of Health intramural scientists to develop new programs and instructional materials for use by schools. During the academic year, some teachers continue to collaborate with Office of Education staff in refining and monitoring the new programs.

Office of Education
National Institutes of Health
9000 Rockville Pike, Building 10, Room 1C129
Bethesda, MD 20892
(301) 496–2427

National Institutes of Health (NIH) Summer Fellowship Program for Inservice Teachers

The NIH Summer Fellowship Program for Inservice Teachers targets teachers across the Nation who work in schools with predominantly minority enrollments. Selected teachers participate in a 1–2-week intensive laboratory training course in basic techniques of molecular and cellular biology where they learn to teach bioethics, use electronic databases, and implement their new skills in the classroom. Throughout the summer, teachers also attend weekly workshops designed to help them incorporate their new skills and lesson plans into the curricula. After training, teachers are placed for a minimum of 6 weeks in the Institutes' intramural laboratories on the Bethesda campus.

Office of Education
National Institutes of Health
9000 Rockville Pike
Building 10, Room 1C129
Bethesda, MD 20892
(301) 496–2427

National Institutes of Health (NIH) Summer Fellowship Program for Preservice Science Teachers

The NIH Summer Fellowship Program for Preservice Science Teachers is targeted to advanced undergraduate students who plan to become secondary school science teachers, especially those students who may serve populations underrepresented in science. The program supplements the students' education where needed and exposes them to NIH scientists and state-of-the-art research. After a 1-week training course, students are placed for a minimum of 6 weeks in the Institutes' laboratories, where they learn basic skills necessary to conduct molecular biology laboratory research. Preservice teachers also attend weekly workshops designed to help them implement new lesson plans in the classroom.

Office of Education
National Institutes of Health
Building 10, Room 1C129
9000 Rockville Pike
Bethesda, MD 20892
(301) 496–2427

"NIH EdNet" Electronic Bulletin Board

NIH EdNet is an electronic bulletin board designed to foster communication between National Institutes of Health (NIH) scientists and precollege students and teachers. A variety of conferences is available. The "Reviews" conference contains short reviews of topics in the biomedical sciences and encourages students to ask questions of the authoring scientist. The "Forum" conference is open to all students and teachers for discussion of scientific questions and pedagogical methods relevant to the teaching of science. Other conferences provide information on available materials, lectures, science fairs, and other topics.

Office of Education
National Institutes of Health
9000 Rockville Pike
Building 10, Room 1C129
Bethesda, MD 20892
(301) 496–2427

Research Supplements for Underrepresented Minority High School Students

The Research Supplements for Underrepresented Minority High School Students is designed to provide support for summer research experiences for underrepresented minorities. Any Principal Investigator holding an active National Institutes of Health research grant may be eligible to submit a request for an administrative supplement to support a minority high school student.

Office of Grant Inquiries
Division of Research Grants
National Institutes of Health
Westwood Building, Room 449
Bethesda, MD 20892
(301) 594–7248

Research Supplements to Promote the Recruitment of Individuals With Disabilities Into Biomedical Research Careers

The Research Supplements to Promote the Recruitment of Individuals With Disabilities Into Biomedical Research Careers program is designed to provide research experiences for qualified high school students with disabilities who wish to participate in an ongoing research project during the summer or during the school year.

Office of Grant Inquiries
Division of Research Grants
National Institutes of Health
Westwood Building, Room 449
Bethesda, MD 20892
(301) 594–7248

Summer Internship Program (SIP)

SIP provides direct laboratory training and experience in National Institutes of Health (NIH) laboratories through summer fellowships for U.S. high school and college students in the biomedical sciences. Participants also attend the Office of Education's summer seminar series for students and teachers, the workshop "Strategies for Success for Future Scientists," and the workshop "How To Become a Member of the Next Generation of Biomedical Scientists." At summer's end, all students are invited to participate in NIH Poster Day—a scientific meeting where students present research to the NIH community. The Office of Education processes the applications for many of the institutes. Students who complete the highly competitive process receive payment for their participation.

Office of Education
National Institutes of Health
Building 10, Room 1C129
9000 Rockville Pike
Bethesda, MD 20892
(301) 496–2427

Summer Science Enrichment Program

The Summer Science Enrichment Program, conducted at sites across the country, encourages underrepresented minorities and underserved youth to pursue professional careers in science, mathematics, and research. During the 6-week sessions, scientists act as teachers and mentors. The program includes classroom and laboratory experiences, as well as weekly field trips and evening seminars.

National Cancer Institute
National Institutes of Health
Executive Plaza North, Room 240
6130 Executive Boulevard
Rockville, MD 20892
(301) 496–8680

U.S. DEPARTMENT OF THE INTERIOR (DOI)

A Home for Pearl

A Home for Pearl is an instructional videotape and accompanying teacher's guide designed to teach elementary school students about the importance of protecting wildlife habitat. The format of four 15-minute segments allows teachers time for conducting preparatory and followup activities. Vocabulary words such as "habitat," "predator," and "endangered species" appear in bold yellow type on the screen and enhance the educational value of this production. It is cosponsored by the U.S. Fish and Wildlife Service, the Colorado Division of Wildlife, and the National Fish and Wildlife Foundation. Materials are available free to teachers with funding from the Phillips Petroleum Company.

Karol Media
350 North Pennsylvania Avenue
Box 7600
Wilkes Barre, PA 18773–7600
(800) 526–4773/Fax: (717) 822–8226

Bureau of Reclamation Environmental Education Program

A variety of environmental subjects, with an emphasis on water resources, is offered to teachers and students in grades K–12. Subjects vary from archaeology to wildlife biology. Programs are presented in the classroom as well as outdoors at laboratory schools, summer camps, and at some visitor centers. The program currently operates in the States of California, Colorado, Montana, Nevada, Idaho, and Utah.

Lynn Almer, Environmental Education Manager
Bureau of Reclamation
P.O. Box 25007 (D–4005)
Denver, CO 80225–0007
(303) 236–8633

Cargo for Conservation

Cargo for Conservation is a wildlife education program focusing on the impact of illegal/mismanaged wildlife trade on federally protected animal and plant species. Hands-on wildlife items (parts and products confiscated by the U.S. Fish and Wildlife Service at U.S. ports of entry) are included with supplemental written materials. The written materials are designed for grades 4–8 but can be used effectively with older audiences. The program, available for loan to educational institutions, is sponsored by the U.S. Fish and Wildlife Service in cooperation with the Union Camp Corporation, the National Wildlife Federation, and the National Fish and Wildlife Foundation.

Thomas Rayl
National Fish and Wildlife Forensics Laboratory
U.S. Fish and Wildlife Service
1490 East Main Street
Ashland, OR 97520
(503) 482–4191/Fax: (503) 482–4989

Earth Science Information Centers (ESICs)

Earth Science Information Centers offer nationwide information and sales service for U.S. Geological Survey map products and Earth science publications. This network of ESICs provides information about geologic, hydrologic, topographic, and land-use maps; books and reports; aerial, satellite, and radar images and related products; Earth science and map data in digital format and related application software; and geodetic data. ESICs can also provide information on private and public producers of Earth science-related products throughout the United States. ESICs are listed in the State Highlights section of this publication for the 10 States that have Centers. For more information contact any ESIC or call (800) USA–MAPS.

Earth Science Information Center
507 National Center
Reston, VA 22092
(703) 648–6045
(800) USA–MAPS

Federal Junior Duck Stamp Conservation Program

The Federal Junior Duck Stamp Conservation Program uses art as a catalyst to generate interest in wetlands conservation. K–12 students compete for prizes, including an expense-paid trip to Washington, D.C., for the top three winners. The program currently operates in 25 States, and expansion to all 50 States is expected within the near future.

JoAnn Schneider, Program Director
Federal Junior Duck Stamp
Conservation Program
Department of the Interior
1849 C Street NW., Room 2058
Washington, DC 20240
(202) 208–4354

Heritage Education Program

The Bureau of Land Management's Heritage Education Program is multifaceted, providing educational experiences and teaching resources with a focus on archaeology, history, and paleontology for the school setting as well as for outdoor classrooms, museums, and other informal learning environments. Materials for educators include *Intrigue of the Past*, a teacher's guide to archaeology and ideas for classroom activities.

Project Manager
Bureau of Land Management Imagination Team
Anasazi Heritage Center
P.O. Box 758, 27501 Highway 184
Dolores, CO 81323
(303) 882–4811

Parks as Classrooms

The Parks as Classrooms Program offers teachers an opportunity to use the national parks to augment classroom instruction. Emphasis in most locations is on ecological and biological principles, while at fewer locations geological, meteorological, and oceanographic principles are specified. The National Park Service offers workshops in the parks to encourage teachers to build their curricula around park resources.

Robert Huggins, National Program Director
National Park Service
P.O. Box 37127
Washington, DC 20013–7127

Project Water Education for Teachers (WET)

Project WET develops diverse and innovative approaches to a balanced water education program that appeals to a wide spectrum of educators and students. Responding to the varied learning styles of young people and highlighting natural and social sciences, mathematics, and the arts, Project WET is producing diverse educational publications, models, and programs. States currently involved in Project WET are listed in the State Highlights section of this publication.

Dennis Nelson, Director
National Project WET
201 Culbertson Hall
Montana State University
Bozeman, MT 59717
(406) 994–5392

Project WILD

Project WILD provides training and curriculum materials for teachers interested in the environmental sciences. The guides contain more than 80 supplementary, interdisciplinary activities for grades K–12. Guides are free to teachers attending the training session. Interested teachers may contact their Project WILD State Coordinator, listed in the State Highlights section.

Betty Olivolo, Director
Project WILD
5430 Grosvenor Lane
Bethesda, MD 20814
(301) 493–5447/Fax: (301) 493–5627

Research Apprenticeship Program for Students (RAPS)

Selected high school students learn about the management of natural and cultural resources on the Nation's public lands through first-hand work experience. Students work directly with scientists and other professionals. The program operates in the Western United States.

Steven Shafran
Bureau of Land Management
Denver Federal Building
390 Union, Suite 350
Denver, CO 80025–5698
(303) 969–5698

Suitcase for Survival

Suitcase for Survival is a special education campaign to acquaint young people with protected wildlife and how illegal trade in these species threatens them with extinction. The program is a cooperative effort sponsored by the U.S. Fish and Wildlife Service, the American Zoo and Aquarium Association, the World Wildlife Fund, and the National Fish and Wildlife Foundation. Suitcases, donated by American Tourister, are filled with confiscated wildlife products, accompanied by educational materials. Operated nationally through zoological parks across the country, the program sponsors training classes for teachers to enable them to use the suitcases and recommends curriculum to help children understand the connection between living animals and the products in the suitcases.

Lynn Baptista, Director of Education
American Zoo and Aquarium Association
7970–D Old Georgetown Road
Bethesda, MD 20814
(301) 907–7777

Watchable Wildlife

Watchable Wildlife will create a national network of wildlife viewing areas by forming State coalitions that consist of Federal agencies, nonprofit organizations, and environmental associations. Teachers may, for a small fee, purchase a guidebook to their State's Watchable Wildlife facilities. Future plans include the development of interpretive exhibits, visitor centers, environmental and conservation programs, and educational materials. Currently, 20 States participate in this program.

Mark Hilliard, Wildlife Appreciation
Program Manager
Western Fish and Wildlife Staff
3380 Americana Terrace
Boise, ID 83706
(208) 384–3088

Youth Conservation Corps

The Youth Conservation Corps is a summer employment program offered by both the U.S. Department of Agriculture and DOI. Students, ages 15–18, work on projects to further the development and conservation of U.S. natural resources. Work projects are planned, directed, and executed to give enrollees an understanding of their tasks and how their work enhances the environment.

Youth Conservation Corps Coordinator
U.S. Department of the Interior
National Park Service
P.O. Box 37127, Suite 57
Washington, DC 20013–7217
(202) 343–5514

U.S. DEPARTMENT OF LABOR (DOL)

Job Corps

A residential employment and training program for severely disadvantaged youth, 16–24, Job Corps prepares young people for employment and entrance into vocational/technical schools or other institutions for further education and training. Students receive room and board, books, supplies, and a cash living allowance. The program offers vocational training; English-as-a-second-language (ESL); basic education; and instruction in personal hygiene, nutrition, positive work habits, social skills, parenting, intergroup relations, and constructive use of leisure time. Services are provided at one of Job Corps' 100-plus centers across the country. The program offers an individually paced education program that includes reading, mathematics, and GED and precollege preparation.

Judy Vitale, Unit Chief
Education and Enrollee Support Unit, Job Corps
Employment and Training Administration
U.S. Department of Labor
200 Constitution Avenue NW., Room N4507
Washington, DC 20210
(202) 219–5556/Fax: (202) 219–5183

Job Training Partnership Act (JTPA) State and Local Programs for Economically Disadvantaged Adults and Youth

State and local JTPA Programs, available in virtually every part of the country, prepare economically disadvantaged adults and youth to compete in the labor market. Depending on an individual participant's needs, a broad array of services are available through these programs, including vocational training, basic mathematics, and GED instruction. Activities include a special Summer Jobs Program for low-income youth. The summer program has an education component. For State JTPA liaisons, see the State Highlights section of this publication.

Donald Kulick, Acting Director
Office of Employment and Training Programs
Employment and Training Administration
U.S. Department of Labor
200 Constitution Avenue NW., Room N4469
Washington, DC 20210
(202) 219–5580/Fax: (202) 219–7190

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

Aviation Career Education (ACE) Academy

The Federal Aviation Administration (FAA), along with a host educational institution, cosponsors this 1-week summer aviation education program for high school students. The program provides students with diverse aviation career exploration experiences. The program focuses on aviation career clusters identified by FAA, with an emphasis on opportunities for women and minorities. A goal is to have one program in each State and U.S. Territory. The FAA will conduct regional leadership workshops and provide funds based on the availability of resources. For more information, contact the FAA Aviation Education Representative listed for your State in the State Highlights section of this publication.

Aviation Education Resource Centers (AERC)

Aviation Education Resource Centers, located at colleges, museums, and State aviation authority offices, function as information distribution centers for Federal Aviation Administration education materials and resources. The Resource Centers maintain and provide quantities of printed materials, videotapes, and computer educational software. Center personnel can also provide general information, conduct workshops, and make aviation-related presentations. See the State Highlights section for the location of the centers.

Aviation Education Workshops for Teachers

Aviation Education Workshops for Teachers provide teachers with information on FAA aviation programs and materials and prepare them to teach aviation in the classroom. Annual workshops are conducted at colleges and universities across the Nation. The FAA provides information, materials, and speakers for the program. For more information, contact the FAA Aviation Education Representative listed for your State in the State Highlights section.

Phillip S. Woodruff, Division Manager
Aviation Education Division (AHT–100)
Federal Aviation Administration
400 Seventh Street SW., Plaza–100
Washington, DC 20590
(202) 366–7018/Fax: (202) 366–3786

International Science Fair

The annual International Science Fair is the world's largest science fair. Administered by Science Service, Inc., the FAA supports this program by providing qualified judges and awards in the "Special Awards Program" area. The Special Awards Program is sponsored by scientific and engineering societies, Federal agencies, colleges and universities, and private industry.

Aviation Education Representative
Atlantic City International Airport
Human Resource Management Division
Atlantic City, NJ 32137
(609) 485–6032/Fax: (609) 485–4391

National Congress on Aviation and Space Education

In partnership with the National Aeronautics and Space Administration and the Civil Air Patrol, the FAA annually presents teacher workshops and crosstalk sessions to exchange ideas on promoting aerospace education. For more information, contact the FAA Aviation Education Representative listed for your State in the State Highlights section.

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

Environmental Education Grants Program

The purpose of the Environmental Education Grants Program is to stimulate environmental education by supporting projects to design, demonstrate, or disseminate new practices, methods, or techniques related to environmental education. Projects must demonstrate the potential for wide application and address a high-priority environmental issue. Only State and local agencies and nonprofit organizations or institutions are eligible to apply for grants; however, teachers may participate in the program through their school or another organization.

Environmental Education Grants Program
Environmental Education Division
U.S. Environmental Protection Agency
Attention: George Walker
401 M Street SW. (1707)
Washington, DC 20460
(202) 260–4965

Environmental Resource Curricular Program

In the Environmental Resource Curricular Program, EPA, working with educators, sponsors the development of applied, minds-on, integrated teaching tools designed to fit within existing learning objectives. These innovative modules use case studies to explain scientific events. Students conduct the science activities and bridge the science into action at the community level.

Ron Slotkin, Program Manager
Office of Science, Planning, and
Regulatory Evaluation
U.S. Environmental Protection Agency
401 M Street SW. (H–8105)
Washington, DC 20460
(202) 260–0578/Fax: (202) 260–0036

National Consortium for Environmental Education and Training

EPA entered into a cooperative agreement with a group of academic institutions, corporations, and nonprofit organizations headed by the University of Michigan to develop and operate a national teacher training program, the National Consortium for Environmental Education and Training. The program targets inservice teachers (K–12) and nonformal educators, and includes teacher training, curriculum evaluation, and information dissemination for environmental education.

National Consortium for Environmental
Education and Training
University of Michigan
School of Natural Resources
Ann Arbor, Michigan 48109–1115

The President's Environmental Youth Awards

EPA's President's Environmental Youth Awards Program honors outstanding commitment to the environment. Young people in grades K–12 in all 50 States are eligible to participate. All participants receive a certificate and may compete for national recognition. Each of EPA's 10 regional offices selects a national winner. The winners and their sponsors are invited to participate in the National Awards Ceremony held annually in Washington, D.C.

Youth Coordinator
Environmental Education Division
U.S. Environmental Protection Agency
401 M Street SW. (1707)
Washington, DC 20460
(202) 260–8749/Fax: (202) 260–0790

Progression Education Program (PEP)

Initiated in fiscal year 1992, 10 training cooperative agreements between educational institutions and EPA laboratories focused on career access and student preparation that may lead to employment in the environmental field. The agreements help to encourage minority students from high school, college, or graduate school to pursue advanced degrees in environmental science. Tuition assistance and summer employment are provided. The program also produces targeted curriculum for use by such minority groups as Native Americans. In 1994–1995 the program will be open to competition, and educational institutions may apply through participating EPA/Office of Research and Development Laboratories.

Ron Slotkin, Program Manager
Office of Science, Planning, and
Regulatory Evaluation
U.S. Environmental Protection Agency
401 M Street SW. (H–8105)
Washington, DC 20460
(202) 260–0578/Fax: (202) 260–0036

Project AIRE (Air Information Resources for Education)

In cooperation with the American Lung Association, the EPA Air and Radiation employees, together with schools nationally, are promoting awareness of air quality issues and science. Program volunteers visit classrooms and conduct demonstrations, talks, and interactive sessions about air pollution and the resultant decision- and policymaking process. Text is available.

Linda Zarro, Coordinator
Office of Air and Radiation
U.S. Environmental Protection Agency
401 M Street SW. (6102)
Washington, DC 20460
(202) 260–6621

Public Information Centers (PICs)

Public Information Centers provide public access to information selected and maintained by the Federal Government on major ecological and environmental issues. The Centers offer publications, data, interactive computer workstations, theaters, and exhibits, although available services may vary from center to center. The PIC also has environmental education materials for K–12 students and teachers. A Public Information Center is located at each of the 10 regional offices, which are listed in the State Highlights section of this publication.

Public Information Center
U.S. Environmental Protection Agency
401 M Street SW. (3404)
Washington, DC 20460
(202) 260–7751/Fax: (202) 260–2080

Students Watching Over Our Planet Earth (SWOOPE)

Students Watching Over Our Planet Earth is a partnership program between EPA and the U.S. Department of Energy. An innovative environmental education system for teachers and students, the program uses hands-on science education techniques to challenge students to take an active role in understanding the dynamics of our planet. It incorporates curriculum, teacher training, real data, and a national database of environmental information.

Environmental Education Division
U.S. Environmental Protection Agency
401 M Street SW. (1707)
Washington, DC 20460
(202) 260–8749/Fax: (202) 260–0790
(800) 931–9318

Water Employees Together With America's Youth

In cooperation with National Geographic, the Water Employees Together With America's Youth Program was launched to expand the National Geographic Awareness Week Program. Program volunteers visit classrooms and conduct demonstrations about water and other environmental issues.

Education Coordinator
Office of Water
U.S. Environmental Protection Agency
401 M Street SW. (4102)
Washington, DC 20460
(202) 260–0599

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Aerospace Education Services Program (AESP)

AESP reaches millions of students each year with its traveling aerospace education units that bring the aerospace program into our Nation's schools, conducting classroom and assembly programs on the principles of rocketry, living and working in space, aeronautics, space science, and NASA's history and accomplishments. Up-to-date information is also provided on NASA's current and future projects. However, the program is in great demand and requests for visits should be initiated well in advance. For more information contact your State's Field Center, listed in the State Highlights section of this publication.

Elementary and Secondary Branch
Education Division
Code FEE
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1518

Aerospace Education Services Program (AESP) In-Service Component

An Aerospace Education Services Program specialist can provide teacher workshop opportunities, presenting ways in which aerospace topics may be integrated into the curriculum or supplement it. Workshop content can be tailored to a school's specific areas of interest. The aerospace education specialist can also provide resource materials and other information for curriculum enrichment. In areas where the program is scheduled for presentation at more than one school, as in large school districts, additional specialists are available. For more information contact your State's Field Center, listed in the State Highlights section of this publication.

Elementary and Secondary Branch
Education Division
Code FEE
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1518

Central Operation of Resources for Educators (CORE)

CORE was established for the national and international distribution of NASA educational materials in audiovisual format. To order a catalog and order forms, submit written requests on school letterhead. A nominal fee includes the cost of the materials plus shipping and handling.

NASA CORE
Lorain County Joint Vocational School
15181 Route 58 South
Oberlin, OH 44074
(216) 774–1051, ext. 293/294

Community Involvement Program (CIP)

The Community Involvement Program is a unique, multidimensional service that seeks to involve not just schools, but service clubs, local government officials, and the private sector in a community-wide program that places special emphasis on the educational value of the Nation's aerospace program. CIPs are usually initiated at the request of a school administrator or State education official. Once a community has been selected, NASA officials and educators within the community meet to plan the program and its duration, which can range from 1 week to 1 month. Aerospace Education Services Program specialists usually form the core of the program, with additional NASA personnel added as desired or needed. While no two CIPs are alike, a typical program includes many of the elements of an education specialist's visit in an expanded format; for example comprehensive inservice workshops, community exhibits, student competitions, workshops, assemblies for both students and the general public, and other public events. CIPs are extremely well received and are in great demand. Unfortunately, due to limited resources and the intensive nature of these programs, NASA conducts no more than four or five CIPs each year. Smaller school districts are encouraged to contact other school districts, or possibly a State education official, in an effort to widen the geographic area proposed for this program. For more information contact your State's Field Center, listed in the State Highlights section of this publication.

Elementary and Secondary Branch
Education Division
Code FEE
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1518

Educational Horizons

The newsletter *Educational Horizons* is NASA's triannual publication for educators. Each issue features information about upcoming Shuttle missions, updates on space science and aeronautics research, and information about NASA's Education Program. The newsletter is free by subscription to educators and announces the latest educational publications available from NASA.

NASA Headquarters
Educational Horizons
Code FE
Washington, DC 20546–0001
(202) 358–1533

MATHCOUNTS

MATHCOUNTS is an annual mathematics competition for 7th- and 8th-grade students that brings a number of organizations together in a cooperative effort to promote and reward excellence in mathematics. All students who participate in MATHCOUNTS receive an award. Competition begins at the local level and culminates in a national competition. NASA sponsors a week-long trip to the U.S. Space Camp for winners of the national competition and awards a 4-day mathematics workshop at a NASA Field Center to the top eight coaches in the national competition.

MATHCOUNTS
1420 King Street
Alexandria, VA 22314
(703) 684–2928

NASA Educational Workshops for Elementary School Teachers (NEWEST)

NEWEST provides a 2-week workshop (graduate credit optional) to elementary school teachers (grades K–6) at a NASA Field Center. The teachers participate in seminars conducted by NASA scientists and engineers, learn about current research and projects, and are provided with techniques to assist them in incorporating aerospace-related topics into their curricula. Participants receive a variety of educational materials to take back to their classrooms. The application deadline is mid-February, with selection in mid-April.

National Science Teachers Association
NEWEST Program
1840 Wilson Boulevard
Arlington, VA 22201–3000
(703) 243–7100

NASA Educational Workshops for Math, Science, and Technology Teachers (NEWMAST)

NEWMAST provides mathematics, science, and technology teachers (grades 7–12) a 2-week inservice workshop (graduate credit optional) at a NASA Field Center. Participants observe state-of-the-art research and development activities, interact with NASA scientists and engineers, and receive a variety of educational materials to share with their peers and students. The application deadline is mid-February with selection in mid-April.

National Science Teachers Association
NEWMAST Program
1840 Wilson Boulevard
Arlington, VA 22201–3000
(703) 243–7100

NASA Spacelink

NASA Spacelink is a computer information service that allows individuals to receive news about current NASA programs, activities, and other space-related information, including historical and astronaut data, lesson plans, classroom activities, and even entire publications. Although primarily intended as a resource for teachers, anyone with a personal computer and a modem can access the network.

The Spacelink computer access number is (205) 895–0028. Users need a computer, modem, communications software, and a long-distance telephone line to access Spacelink. It is also available through the Internet, a worldwide computer network connecting a large number of educational institutions and research facilities. Callers with Internet access may reach NASA Spacelink at any of the following addresses:

spacelink.msfc.nasa.gov
xsl.msfc.nasa.gov
192.149.89.61

For more information, contact:

Spacelink Administrator
Mail Code CA21
NASA Marshall Space Flight Center
Huntsville, AL 35812–0001
(205) 544–6360

NASA Teacher Resource Center Network (TRCN)

Teachers can enhance their existing curriculum through information that is generated by NASA programs, technologies, and discoveries. Although NASA educational materials relate primarily to mathematics, science, and technology, they can be valuable curriculum supplements for all subjects.

To disseminate materials to elementary educators, secondary educators, and higher education faculty, the NASA Education Division has established the NASA Teacher Resource Center Network. TRCN is composed of Teacher Resource Centers, Regional Teacher Resource Centers, and the NASA Central Operation of Resources for Educators.

Technology and Evaluation Branch
Education Division
Code FET
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1540

NASA Teacher Resource Centers (TRCs)

Located at the nine NASA Field Centers, the Teacher Resource Centers have a variety of NASA-related educational materials in several formats: videotapes, slides, audiotapes, publications, lesson plans, and activities. NASA educational materials are available to be copied at the TRCs. See the State Highlights section of this publication for the TRC in your State.

Technology and Evaluation Branch
Education Division
Code FET
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1540

NASA Television

NASA Television is the Agency's distribution system for live and taped programs. It offers the public a front-row seat for launches and missions, as well as informational and educational programming, historical documentaries, and updates on the latest developments in aeronautics and space science. The educational programming is aimed at inspiring students to achieve, especially in science, mathematics, and technology. If your school's cable television system carries NASA TV, or if your school has access to a satellite dish, the programs may be downlinked and videotaped. Daily and monthly programming schedules for NASA Television are also available via NASA Spacelink. NASA Television is transmitted on Spacenet 2 (a C-band satellite) on transponder 5, channel 8, 69 degrees West with horizontal polarization, frequency 3880.0 Megahertz, audio on 6.8 Megahertz.

NASA Select
Technology and Evaluation Branch
Education Division
Code FET
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1540

Regional Teacher Resource Centers (RTRCs)

To increase the opportunity for educators to visit the Teacher Resource Centers, NASA forms partnerships with school systems, universities, museums, and other nonprofit organizations to serve as Regional Teacher Resource Centers. Teachers may preview, copy, and receive NASA materials at these sites. See the State Highlights section for RTRC locations.

Technology and Evaluation Branch
Education Division
Code FET
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1540

Satellite Videoconferences

The NASA Education Satellite Videoconference Series for Teachers is a series of professional development programs for educators. Its objectives are to (1) inform teachers about current developments in America's aeronautics and space programs, and (2) demonstrate techniques to teachers for instructing students about aerospace concepts. The videoconference series is free to registered educational institutions. To participate, institutions must have a C-band satellite receiving system, teacher release time, and an optional long-distance telephone line for interaction. The programs may be videotaped and copied for later use.

Videoconference Coordinator
NASA Teaching From Space Program
Oklahoma State University
300 North Cordell
Stillwater, OK 74078–0422
(405) 744–7015

Science and Engineering Fairs

To stimulate interest in aeronautics and aerospace sciences among secondary school students, NASA participates in the science fairs administered by Science Services. NASA recognizes students with outstanding projects in aeronautics, space sciences, mathematics, space technology, and applications. Participation in NASA's award program must be requested by fair directors, and NASA depends on individual science and engineering fair judges to select recipients of NASA certificates. NASA's own team of judges attends the international fair and selects 10 students to receive an educational trip, accompanied by their teachers, to a NASA Field Center.

Science Service
1719 N Street NW.
Washington, DC 20036
(202) 785–2255

Shuttle Amateur Radio Experiment (SAREX)

With the help of Amateur Radio clubs and ham operators, astronauts on designated shuttle flights make radio contacts while in orbit. The astronauts talk directly with teachers, parents, and communities. The American Radio Relay League, the Radio Amateur Satellite Corporation, and NASA's Education Division sponsor this shuttle experiment. The American Radio Relay League can provide educators with lesson plans and resource materials.

American Radio Relay League (ARRL)
225 Main Street
Newington, CT 06111
(203) 666–1541

Space Science Student Involvement Program (SSIP)

SSIP is an annual program that allows students to compete in diverse areas related to space exploration, including the arts and sciences. While the program culminates in a national competition, it has been designed to be used within the context of existing curricula. SSIP has five multidimensional program elements within which students may compete: one for grades 3–12; one for grades 3–5; one for grades 6–8; and two for grades 9–12. Public or private school students are eligible to apply.

National Science Teachers Association
SSIP Program
1840 Wilson Boulevard
Arlington, VA 22201–3000
(703) 243–7100

Summer High School Apprenticeship Research Program (SHARP)

The objective of the SHARP Program is to channel students that traditionally have not been represented into the fields of mathematics, science, and engineering. Selected students participate in intensive science and engineering research at a NASA Field Center as an apprentice to a NASA mentor in a related research area. To be selected, students must have a demonstrated interest and aptitude for science, mathematics, and technology-related areas and live within commuting distance to a NASA Field Center. For more information contact your State's Field Center, listed in the State Highlights section of this publication.

Elementary and Secondary Branch
Education Division
Code FEE
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1518

Urban Community Enrichment Program (UCEP)

The Urban Community Enrichment Program exposes teachers and middle school students from urban communities to interesting and broadening activities. Special emphasis is placed on communication, logic, and reasoning skills that are curriculum-based. Major activities include lectures, demonstrations, and structured classroom activities highlighting the various sciences that supplement the ongoing curriculum. In addition, workshops and other activities are offered to school personnel. Technical and logistical assistance is supplied by the NASA UCEP Coordinator. In preparation for the program, NASA Aerospace Education Specialists train core teachers as a team to conduct interdisciplinary aerospace activities in school districts. For more information contact your State's Field Center, listed in the State Highlights section of this publication.

Elementary and Secondary Branch
Education Division
Code FEE
NASA Headquarters
Washington, DC 20546–0001
(202) 358–1518

NATIONAL SCIENCE FOUNDATION (NSF)

Advanced Technological Education (ATE)

This program promotes exemplary improvement in advanced technological education through support of curriculum development and program improvement. The program targets technicians being educated for the high performance workplace of advanced technologies. Such technicians normally earn an associate degree in engineering or science technology that qualifies them for immediate employment or for transfer to a 4-year institution. Because of the nature of advanced technological education programs, where appropriate, projects should build on alliances of associate degree granting institutions with 4-year colleges and universities, secondary schools, business, industry, and government. The program will support up to five National/Regional Centers of Excellence in Advanced Technological Education; a spectrum of projects for the development of instructional materials and curriculum, instrumentation and laboratory improvement, and faculty and teacher development; and a few special projects such as conferences and studies that will result in a better understanding of issues in advanced technological education. ATE centers and projects will result in major improvements in advanced technological education, serve as models for other institutions, ensure that students acquire strong backgrounds in mathematics and science, and yield nationally usable educational products. All projects must have a vision for technician education that is used to guide project development. The ATE program is managed in the Division of Undergraduate Education (DUE) in cooperation with the Division of Elementary, Secondary, and Informal Education (ESIE).

Advanced Technological Education
Directorate for Education and Human
Resources
Division of Undergraduate Education
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1668

Collaboratives for Excellence in Teacher Preparation Program

The Collaboratives for Excellence in Teacher Preparation Program supports projects aimed at major changes in approaches to the undergraduate preparation of future teachers of elementary and secondary science and mathematics. This includes development of new institutional structures, the production of creative materials, courses and curricula for teacher education, and research on factors affecting the recruitment and preparation of teachers. Projects demonstrate leadership by the scientific discipline departments, and emphasize a solid foundation in science or mathematics and rigorous attention to effective teacher practices, including the use of advanced instructional technologies. Special interests include multidisciplinary projects and initiatives for recruiting members of underrepresented groups into the teaching profession. Collaborations among scientists, science educators, teachers, and other educational leaders, within and among institutions of higher education and school systems, are encouraged in the planning and implementation of projects. Colleges and universities or their consortia that have the capacity to prepare significant numbers of highly qualified teachers are eligible to submit proposals. In addition, proposals for teacher preparation that are smaller in scale and more focused than a collaborative are welcome in the other programs in the Division of Undergraduate Education, as appropriate.

Teacher Preparation Program
Division of Undergraduate Education
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1668

Comprehensive Partnerships for Minority Student Achievement Program

The Comprehensive Partnerships for Minority Student Achievement Program supports comprehensive precollege education reform programs targeted at school systems having significant minority student populations. City and county school systems, which are the units of change, are expected to link with institutions of higher education and community-based and other education organizations in the design and implementation of in-school student and teacher enhancement activities and informal education efforts. The program's goals are to improve student achievement in mathematics and science courses, to enhance teacher knowledge and skills, and to expand student interest in science, mathematics, and technology as career choices. Academic institutions and nonprofit organizations are eligible to apply for funding through this program.

Comprehensive Partnerships for Minority
Student Achievement
Division of Human Resource Development
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1633

Informal Science Education Program

Informal Science Education (ISE) projects provide rich and stimulating environments outside of school where individuals of all ages, interests, and backgrounds can increase their appreciation and understanding of science, mathematics, and technology. Projects, developed by museums and science centers, the media, and community/youth organizations have the potential for significant regional or national impact. The program is particularly oriented toward collaborative projects that establish linkages among organizations with similar goals, as well as projects effective in reaching traditionally underserved audiences. Proposals are accepted from any organization having a scientific or education mission.

Informal Science Education Program
Division of Elementary, Secondary,
and Informal Education
National Science Foundation, Room 885
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1616

Instructional Materials Development Program

The Instructional Materials Development Program supports development of an innovative, comprehensive, and diverse portfolio of materials, prekindergarten through grade 12, which implement standards-based reform in science, mathematics, and technology education and lead to development of thinking skills and problemsolving abilities. Materials, designed for the success of all students, are based on the latest research reflecting how students learn most effectively, and incorporate state-of-the-art instructional technologies and appropriate assessment strategies. Supported projects are expected to have dissemination plans that lead to adoption and utilization in schools both nationally and internationally. Any organization with a scientific or educational mission may submit proposals to this program.

Instructional Materials Development Program
Division of Elementary, Secondary,
and Informal Education
National Science Foundation, Room 885
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1614

Presidential Awards for Excellence in Science and Mathematics Teaching Program

The Presidential Awards for Excellence in Science and Mathematics Teaching Program provides national recognition to outstanding teachers in science and mathematics. Each year, two mathematics teachers and two science teachers at the elementary and middle/junior/senior high school levels are selected from each State and each of four jurisdictions. State finalists receive a cash award; national finalists receive discretionary funds to improve science and/or mathematics education at their home institution and a microcomputer, as well as attend 1 week of special activities in Washington, D.C., which promote professional interactions. Eligible teachers include those whose primary responsibility is classroom teaching of science, mathematics, or technology in public or private schools. Applicants must have a minimum of 5 years' experience and intend to continue teaching over the next 2 years. Teachers can be nominated by colleagues, administrators, students, or parents.

Presidential Awards for Excellence in
Science and Mathematics Teaching
Division of Elementary, Secondary, and
Informal Education
National Science Foundation, Room 885
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1613

Programs for Persons With Disabilities

NSF Programs for Persons With Disabilities have recently been expanded and are committed to bringing about change in academic and professional climates, developing new methods of teaching science and mathematics, increasing the awareness and recognition of the needs and capabilities of students with disabilities, promoting the accessibility and appropriateness of instructional materials and education technologies, and increasing the availability of mentoring resources. Though the Foundation encourages persons with disabilities to participate in fully NSF-supported programs, its Human Resource Division has initiated efforts focused on (1) eliminating barriers to the participation of students with disabilities in science, engineering, and mathematics studies; (2) changing the attitudes of the education community and the public in general about the potential of persons with disabilities; and (3) offering aid for adaptive technologies and assistance to allow students, scientists, engineers, and mathematicians to participate in NSF-supported research.

Programs for Persons With Disabilities
Division of Human Resource Development
Directorate for Education and Human
Resources
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1637

Programs for Women and Girls

The goal of the Programs for Women and Girls is to elicit projects that have high potential for effecting both short- and long-term changes in the representation of women in science, engineering, and mathematics careers, and in the overall science, engineering, and mathematics education of women and girls. Efforts involved in the initiative address educational issues from preschool through the graduate level, as well as professional issues. Three programs—Model Projects, Experimental Projects, and Information Dissemination Activities for Women and Girls—accomplish this goal.

Programs for Women and Girls
Division of Human Resource Development
Directorate for Education and Human
Resources
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1637

Rural Systemic Initiatives Program

The Rural Systemic Initiatives Program (RSI) is a new effort on the part of the National Science Foundation to address barriers to systemic and sustainable improvements in science, mathematics, and technology education in rural, economically disadvantaged regions of the Nation. The RSI is designed to fund projects from coalitia in regions defined by similarities in social, cultural, and economic circumstances, rather than by governmental boundaries. The program supports development activities for formation of partnerships and determination of present needs and resources and of future goals, implementation of strategies directed toward systemic educational reform, and technical assistance needed for developing and implementing reform.

Rural Systemic Initiatives
Office of Systemic Reform
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1684

Statewide Systemic Initiatives Program

The Statewide Systemic Initiatives (SSI) Program is a major effort by NSF to encourage improvements in science, mathematics, and engineering education through comprehensive systemic changes in the education systems of the States. The SSI Program represents a strategy to strengthen the infrastructure for science and mathematics education through alignment of State policies and resources. This requires the collaboration of educators at all levels, business and industry, parents, and the community at large. States are selected for funding through a rigorous merit review process that includes preliminary proposals, panel reviews of full proposals, and site visits. Selection is based on (1) State commitment to fundamental reform of mathematics and science education; (2) new directions in State vision for mathematics and science education that includes curriculum goals, assessment, teacher development, equity, governance, and improved student outcomes; (3) consensus on the current status of science and mathematics education and on the identification of the most serious problems that need to be addressed; (4) partnerships that enable the effort to succeed; (5) a plan for effective management and oversight; and (6) an evaluation plan that encourages mid-course corrections. Twenty-four States and Puerto Rico received 5-year awards.

Statewide Systemic Initiatives
Office of Systemic Reform
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1682

Summer Science Camps Program

The Summer Science Camps (SSC) Program supports 4–6-week summer enrichment projects for minority students in grades 7–9. Eligible organizations include school districts, museums, colleges and universities, and nonprofit youth-centered or community-based organizations. Proposed activities include a combination of instruction, problemsolving, exposure to the research process, and career exploration that emphasizes student interactions with scientists, mathematicians, and engineers. Academic institutions and nonprofit organizations are eligible to apply for funding through this program. An institution can have only one active SSC award.

Summer Science Camps
Division of Human Resource Development
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1633

Teacher Enhancement Program

The Teacher Enhancement Program supports development of effective approaches and creative materials for the continuing education of elementary, middle, and secondary school teachers of science, mathematics, and technology. Successful projects provide intensive training and followup activities during the academic year that result in strengthening both content knowledge and pedagogical skills; projects are also expected to utilize the most effective instructional materials, assessment strategies, and educational technologies. The program places emphasis on K–8 systemic change projects that promote the comprehensive reform of science and mathematics education in entire school districts, regions, or States, and provide resources for building the capacity of others to deliver teacher enhancement. Organizations having a scientific or educational mission may submit a proposal.

Teacher Enhancement Program
Division of Elementary, Secondary, and
Informal Education
National Science Foundation, Room 885
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1613

Urban Systemic Initiatives Program

The Urban Systemic Initiatives (USI) Program in science, mathematics, and technology education is a comprehensive and systemic effort designed to enable fundamental reform of K–12 science and mathematics education in large urban school systems. Eligibility for the program is limited to school systems in the 25 cities having the largest numbers of school-aged children (ages 5–17) living in poverty as determined by the 1990 Census. Built upon experience gained from the Statewide Systemic Initiatives (SSI) program and the Comprehensive Regional Centers for Minorities (CRCM), the program provides significant support for 5 years to cities that have completed comprehensive planning and demonstrate readiness to make systemic and sustainable changes in the policies, practices, and procedures of urban school systems. At present, nine of the eligible cities have submitted proposals approved for award by the National Science Board.

Urban Systemic Initiatives
Office of Systemic Reform
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1684

Young Scholars Program

The Young Scholars Program is designed to excite students entering grades 7–12 about science, mathematics, and technology, and to encourage them to investigate and pursue careers in these fields. The program emphasizes student participation in the process of scientific discovery through interaction with practicing scientists in the laboratory and in the field. Projects offer a combination of research and problemsolving activities, along with discussions of career preparation and science ethics. Proposals may be submitted by colleges or universities or their associations or consortia, scientific or professional societies whose members are primarily university faculty or research, and for-profit industries or other organizations that are engaged in significant advanced research efforts and have experience interacting with students.

Young Scholars Program
Division of Elementary, Secondary, and
Informal Education
National Science Foundation, Room 885
4201 Wilson Boulevard
Arlington, VA 22230
(703) 306–1615

SMITHSONIAN INSTITUTION

Harvard-Smithsonian Case Studies in Science Education

The project will create a series of 25 half-hour video case studies accompanied by written guide materials, for use in K–8 preservice and inservice teacher education programs. The project's primary goal is to create visual models of science education reform, and to provoke discussion and critical analysis by the audience of the issues surrounding their application in real-life classrooms.

Nancy Finkelstein
60 Garden Street, Mail Stop 71
Cambridge, MA 02138
(617) 495–9798/Fax: (617) 495–5405

InSIGHT

InSIGHT focuses on advanced high school and introductory college physics courses. The project seeks to identify aspects critical to the design of computer simulations for teaching sophisticated physical concepts to students in introductory physics classes.

Phillip M. Sadler
60 Garden Street, Mail Stop 71
Cambridge, MA 02138
(617) 495–9798/Fax: (617) 495–5405

MicroObservatory

The MicroObservatory project focuses on grades 9–12, and will develop a network of portable, automated, CCD-based (charge-coupled device) reflecting telescopes, accessible to students at their schools and over the Internet. A prototype instrument has been built and five more will be assembled to form a pilot network.

Harvard-Smithsonian Center for Astrophysics
60 Garden Street, MS71
Cambridge, MA 02138
(617) 495–9798/Fax: (617) 496–5405

NSRC Elementary Science Leadership Institutes

Each summer the National Science Resources Institute conducts two Elementary Science Leadership Institutes at the Smithsonian Institution. These Institutes provide teams of administrators, curriculum specialists, teachers, and scientists from school districts across the country with the information and skills they need to develop and maintain effective hands-on elementary science programs. The Institutes are staffed with science educators and scientists who have implemented exemplary elementary science programs in their districts. This Initiative includes technical assistance to school districts across the country that are working to reform their elementary science programs.

National Science Resources Center
Arts and Industries Building, Room 1201
Smithsonian Institution
Washington, DC 20560
(202) 357–2555/Fax: (202) 786–2028

National Science Resources Center's Resource Collection

The National Science Resources Center maintains a comprehensive and growing collection of effective science teaching resource materials. Housed at the Resource Center's library at the Smithsonian Institution, the collection holds more than 5,000 volumes. The resource collection is cataloged and accessible through computerized information databases that include annotations as well as bibliographic data. The Resource Center has also produced an annotated guide to elementary science resources, *Science for Children: Resources for Teachers.*

National Science Resources Center
Arts and Industries Building, Room 1201
Smithsonian Institution
Washington, DC 20560
(202) 357–2555/Fax: (202) 786–2028

The Private Universe Project

The Private Universe Project is developing a 6-part nationally broadcast television series to help science teachers address student preconceptions in science. The 3-year project, funded in 1992, focuses on grades K–12. The series is derived from work pioneered in Project STAR: Science Teaching through its Astronomical Roots, and is an extension of that project's award-winning video, *The Private Universe*. The project will alert science teachers to problems posed by their students' preconceived ideas and will encourage them to devise solutions tailored to students' specific needs.

Harvard-Smithsonian Center for Astrophysics
60 Garden Street, MS71
Cambridge, MA 02138
(617) 496–7687/Fax: (617) 496–7670

Professional Development Opportunities for Teachers

Regional workshops and summer institutes are designed to strengthen ties between museums and schools nationwide and to contribute to the improvement of teaching methods and materials.

Office of Elementary and Secondary Education
Smithsonian Institution
Arts and Industry Building, Room 1163
Washington, DC 20560
(202) 357–2425/Fax: (202) 357–2116

Project ARIES: Astronomy Resources for Intercurricular Elementary Science

ARIES was funded in 1992 for 3 years; its initial focus is grades 3–4. The project will develop a modular, hands-on, discovery-based, intercurricular, multicultural physical science program using astronomy as the central focus. Teacher enhancement videos will also be developed in parallel with the curriculum.

Dr. R. Bruce Ward
60 Garden Street, Mail Stop 71
Cambridge, MA 02138
(617) 495–9798/Fax: (617) 495–5405

Project IMAGE: Investigate Materials About Global Environments

IMAGE focuses on grades 7–12, with an emphasis on grades 7–9. The project developed and field-tested 16 hands-on, investigative activities using satellite and high-altitude imagery to confront students with the problems and challenges of our global environment. A manual of these activities with a teacher's guide will be published in 1995.

Hal Coyle
60 Garden Street, Mail Stop 71
Cambridge, MA 02138
(617) 495–9798/Fax: (617) 495–5405

Project SPICA: Support Program for Instructional Competency in Astronomy

Project SPICA provides astronomy education support to precollege teachers, particularly in grades K–9. The project has prepared approximately 180 expert teachers in 41 States to provide workshops to other teachers who want to enhance their use of astronomy in their classrooms. The SPICA agents may be contacted through the project office. In addition, a manual containing 37 astronomy activities for grades 2–12, *Project SPICA: A Teacher Resource to Enhance Astronomy Education*, is available from Kendall/Hunt Publishing Company.

Harvard-Smithsonian Center for Astrophysics
60 Garden Street, MS71
Cambridge, MA 02138
(617) 495–9798/Fax: (617) 496–5405

Science and Technology for Children

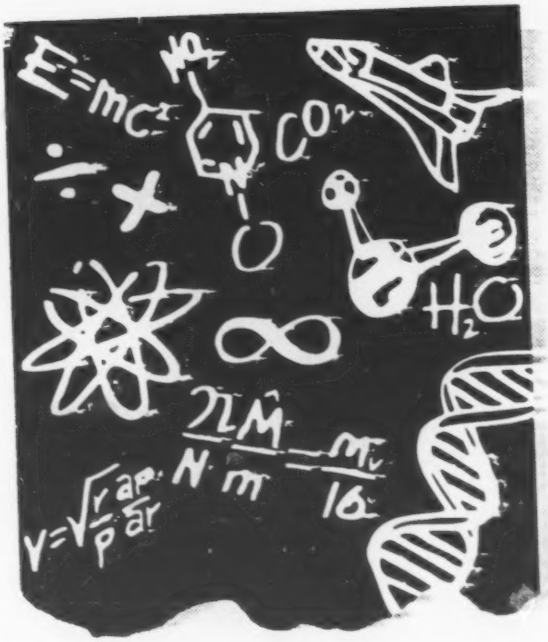
Science and Technology for Children, a curriculum project of the National Science Resources Center, is producing a complete program of science instruction for children in grades 1–6. The 24 units involve children in hands-on investigations of scientific phenomena that enable them to learn by doing.

National Science Resources Center
Arts and Industries Building, Room 1201
Smithsonian Institution
Washington, DC 20560
(202) 357–2555/Fax: (202) 786–2028

Smithsonian Institution Student Programs

The Office of Elementary and Secondary Education (OESE) each year conducts an internship program for graduating high school seniors. Young people from around the country spend 6 weeks working and learning under the guidance of Smithsonian scientists and other experts.

Office of Elementary and Secondary Education
Smithsonian Institution
Arts and Industry Building, Room 1163
Washington, DC 20560
(202) 357–2425/Fax: (202) 357–2116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SECTION THREE

REGIONAL HIGHLIGHTS

BEST COPY AVAILABLE

PACIFIC MATHEMATICS AND SCIENCE REGIONAL CONSORTIUM

Region: Pacific

Areas served:
American Samoa, Commonwealth of the Northern Mariana Islands,
Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, and Yap),
Guam, Hawaii, Republic of the Marshall Islands, and Republic of Palau

The Pacific Mathematics and Science Regional Consortium is one of the 10 Eisenhower Mathematics and Science Regional Consortia established by the U.S. Department of Education. The national network of regional consortia and the Eisenhower National Clearinghouse for Mathematics and Science Education form a coordinated, field-based national infrastructure to promote systemic educational reform. The Consortium serves 10 Pacific Island entities. Its mission is to support professional communities of educators and their partners as they work to improve mathematics science teaching and learning. The Pacific Consortium believes the path to improvement in the classroom lies within and through teachers' professional communities, which generate knowledge, craft new standards, and sustain participants in their efforts to reflect, examine, experiment, and change. To this end, the Consortium focuses on providing technical assistance in implementation, innovation, and dissemination of exemplary materials, teaching strategies, and assessment resources for use by elementary and secondary students, teachers, and administrators.

Given the cultural, linguistic, economic, and environmental diversity of the Pacific region, and the geographic isolation of a significant number of the region's teachers, many of the projects and programs supported by the Pacific Consortium involve long-term and multiphase professional developments that combine a variety of models: training, teacher as researcher, study groups, teacher case studies, credit coursework, and a new educator-in-residence approach. Consortium support often incorporates a training-of-trainers model to ensure that local resources are available; makes use of local, regional, and national telecommunications networks; and builds in local adaptations that recognize and celebrate the diversity that enriches Pacific education. One major feature of the Pacific Consortium is the Mathematics and Science Leadership Team, which consists of the mathematics and science specialists from each entity. The Team is the core development and implementation group for all regional documents and projects carried out through the Consortium. It also determines the kinds of activities to be carried out in the home entities of the Team members, as well as monitoring and facilitating a competition called "Visions and Dreams Grants" for each entity's schools and teachers. The competition is funded through the Pacific Consortium. Below are just some of the activities the Leadership Team has developed or is implementing across the region and within each entity.

Based on work originating at Stanford University and the Far West Regional Educational Laboratory in San Francisco, the Pacific Consortium is working with the Mathematics and Science Leadership Team and several self-selected school sites to use Case Discussions to focus on professional development needs.

The Consortium uses the Pacific Educational Conference to highlight its activities of interest to the region's educators, disseminate information about the Consortium's regional and entity-specific projects, demonstrate effective classroom practices and quality assessment strategies, and disseminate exemplary materials.

The Pacific Consortium supports regionwide and individual entity initiatives. It works in partnership with the University of Hawaii's Curriculum Research and Development Group (CRDG), whose staff support the work of the Leadership Team and provide training and technical assistance in implementing regionally and nationally recognized courses and projects. In collaboration with the CRDG mathematics and science faculty, the Team has developed Pacific Standards for Excellence in Mathematics and Pacific Standards for Excellence in Science. Work in progress includes developing teaching and assessment standards appropriate for the region and aligned with world-class standards.

The Consortium is encouraging a network of teachers across the Pacific and beyond to share information, ideas, and projects. This FISHnet, or Far-Reaching Information Sharing, activity includes specially designed Pacific milkcaps, or pogs, which are exchanged at the same time.

The Yap Classroom Learning Assessment Project is a multiphase initiative that addresses improvement in classroom assessment, curriculum, and instruction through training of trainers and direct teacher training. The CNMI Performance Assessment Project is similar to the Yap Project. Program managers (specialists) in the Commonwealth of the Northern Mariana Islands have formed a training team that is developing performance tasks, assessment criteria, and scoring rubrics.

A Guam Mathematics Project involves teachers—one from each of the 29 public elementary schools and middle schools—in learning how to teach and assess school mathematics for understanding. Ten of these teachers will receive additional staff development to become trainers within the local school district.

School/Community-Based Management (SCBM) Projects in Hawaii schools involve Consortium staff and partners from the University of Hawaii in residence 1–2 days per month to provide focused technical assistance (developing curriculum, creating active learning environments, using heterogeneous work groups, and conducting classroom assessments) to small groups of teachers who plan and implement integrated thematic units.

The Pacific Consortium uses diverse resources to meet the needs of the region's mathematics and science educators. *Voyages in Mathematics and Science* is a quarterly teacher-oriented publication that emphasizes practical applications of quality mathematics and science strategies. The Consortium has set up a computer server and is networking with the Mathematics and Science Leadership Team over standard phone lines. Initially the network will link with the CSSSnet, MSELnet, and IKElinks, the major national science and mathematics leadership networks. The network will then expand to include teacher-to-teacher and student-to-student networking in the region and be called PACIFIC-NET.

Another effort of the Pacific Consortium is to familiarize educators with technologies that can improve and enhance the teaching and learning of science and mathematics in the region's classrooms. The mechanism for this effort is the Pacific Regional Technology Demonstration Site, which was in Honolulu but has now begun to move to other locales in the region. The demonstration site is a multiprong partnership among the Eisenhower National Clearinghouse (ENC), Pacific Consortium, departments of education, and other educational institutions in the region.

Developed through the collaborative efforts of the 10 regional educational laboratories' Laboratory Networking Project (LNP), the Pacific Consortium provides exemplary resources for training in alternative assessment as well as in successful practices in mathematics and science education. A database, also developed through interlaboratory collaboration and housed at the Consortium, describes alternative assessments in mathematics and science. Hard copies are available.

A. Rick Davis, Program Director
Pacific Mathematics and Science Regional
Consortium
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599
email: davisr@prel-oahu-1.prel.hawaii.edu

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AMERICAN SAMOA

DEPARTMENT OF AGRICULTURE (USDA)

4-H State Leader
The State 4-H Youth Development Programs are administered by the Cooperative Extension Service of land-grant universities and colleges. The State 4-H leaders coordinate outreach services and training to all county offices. Contact your State office for further information.

Ropeti Areta, Acting State 4-H Leader
American Samoa Land Grant
P.O. Box 2609
Mapusaga, AS 96799
(684) 699-2019

DEPARTMENT OF COMMERCE (DOC)

Fagatele Bay National Marine Sanctuary
The Fagatele Bay National Marine Sanctuary offers in-school presentations and sponsors the Marine Science Summer Camp, a research-oriented 2-week classroom, laboratory, and field-experience program.

Education Coordinator
Fagatele Bay National Marine Sanctuary
P.O. Box 4318
Pago Pago, AS 96799
(684) 633-7354/Fax: (684) 633-7355

DEPARTMENT OF EDUCATION (ED)

Pacific Region Educational Laboratory (PREL)
The Regional Educational Laboratory identifies effective teaching techniques and school improvement efforts within the region and shares this information with State and local educators.

John W. Kofel, Executive Director
Pacific Region Educational Laboratory
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533-6000/Fax: (808) 533-7599

Pacific Mathematics and Science Regional Consortium
The Eisenhower Regional Consortium provides information and technical assistance to help States and school districts improve mathematics and science education.

A. Rick Davis, Program Director
Pacific Mathematics and Science Regional Consortium
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533-6000/Fax: (808) 533-7599
email: davisr@prel-oahu-1.prel.hawaii.edu

National Diffusion Network (NDN) Facilitator
The National Diffusion Network Facilitator promotes the transfer of successful programs by identifying suitable NDN programs and assists with training and installation.

Sharon Stevenson, NDN Facilitator
Department of Education
Pago Pago, AS 96799
(684) 633-5654/2401/Fax: (684) 633-4240
email: sstevens@inet.ed.gov

DEPARTMENT OF LABOR (DOL)

Job Training Partnership Act Liaison
The Job Training Partnership Act Liaison can provide information about the Job Training Partnership Act (JTPA) State and local programs for economically disadvantaged adults and youth.

Uinifareti Mamea, Director
Department of Human Resources
American Samoa Government
Pago Pago, AS 96799
(684) 633-4485/Fax: (684) 633-1139

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA Regional Office
The regional office takes part in a variety of environmental education programs for both teachers and students. Programs range from teacher workshops and student contests to in-school presentations. Information on environmental issues is also available through the Public Information Center located at the regional office.

Environmental Education Coordinator
Environmental Protection Agency
75 Hawthorne Street, Mail Stop E2
San Francisco, CA 94105
(415) 744-1581/Fax: (415) 744-1605

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA CORE

NASA's Central Operation of Resources for Educators (CORE) was established for the national and international distribution of NASA-produced educational materials in audiovisual format. Submit a written request on your school letterhead for a catalog and order forms. Orders are processed for a small fee that includes the cost of the media.

NASA CORE
Lorain County Joint Vocational School
15181 Route 58 South
Oberlin, OH 44074
(216) 744–1051, Ext. 293 or 294

COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

DEPARTMENT OF AGRICULTURE (USDA)

4–H State Leader

The State 4–H Youth Development Programs are administered by the Cooperative Extension Service of land-grant universities and colleges. The State 4–H leaders coordinate outreach services and training to all county offices. Contact your State office for further information.

Antonio Santos
Acting Director, 4–H
Northern Marianas College
P.O. Box 1250
Saipan, MP 96950
(670) 234–9022

DEPARTMENT OF EDUCATION (ED)

Pacific Region Educational Laboratory (PREL)

The Regional Educational Laboratory identifies effective teaching techniques and school improvement efforts within the region and shares this information with State and local educators.

John W. Kofel, Executive Director
Pacific Region Educational Laboratory
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599

Pacific Mathematics and Science Regional Consortium

The Eisenhower Regional Consortium provides information and technical assistance to help States and school districts improve mathematics and science education.

A. Rick Davis, Program Director
Pacific Mathematics and Science Regional Consortium
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599
email: davisr@prel-oahu-1.prel.hawaii.edu

National Diffusion Network (NDN) Facilitator

The National Diffusion Network Facilitator promotes the transfer of successful programs by identifying suitable NDN programs and assists with training and installation.

Jean Olopai, NDN Facilitator
CNMI Public School System
P.O. Box 1370
Saipan, MP 96950
(670) 322–6410/Fax: (670) 322–4056
(202) 673–5869 (Washington, D.C., office)
email: jolopai@inet.ed.gov

DEPARTMENT OF LABOR (DOL)

Job Training Partnership Act Liaison

The Job Training Partnership Act Liaison can provide information about the Job Training Partnership Act (JTPA) State and local programs for economically disadvantaged adults and youth.

Florida De La Cruz, Executive Director
Marianas JTPA Program
Office of the Governor
Commonwealth of the Northern Mariana Islands
Saipan, MP 96950
(670) 664–7000/7001/Fax: (670) 322–5096

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA CORE
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NASA CORE
Lorain County Joint Vocational School
15181 Route 58 South
Oberlin, OH 44074
(216) 744–1051, Ext. 293 or 294

FEDERATED STATES OF MICRONESIA

DEPARTMENT OF AGRICULTURE (USDA)

Ag in the Classroom State Leader
Ag in the Classroom promotes increased understanding of agriculture and possible careers in the agricultural sciences. With national leadership provided by the U.S. Department of Agriculture, each State manages its own programs, in conjunction with assistance from agribusiness, educational institutions, and government.

Dr. Ruben Dayrit
CTAS/College of Micronesia
Kolonia, Pohnpei, FM 96941
(691) 320–2738

4–H State Leader
The State 4–H Youth Development Programs are administered by the Cooperative Extension Service of land-grant universities and colleges. The State 4–H leaders coordinate outreach services and training to all county offices. Contact your State office for further information.

Anita R. Sula, Director, CES
College of Micronesia
P.O. Box 1179
Kolonia, Pohnpei, FM 96941

DEPARTMENT OF EDUCATION (ED)

Pacific Region Educational Laboratory (PREL)
The Regional Educational Laboratory identifies effective teaching techniques and school improvement efforts within the region and shares this information with State and local educators.

John W. Kofel, Executive Director
Pacific Region Educational Laboratory
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599

Pacific Mathematics and Science Regional Consortium
The Eisenhower Regional Consortium provides information and technical assistance to help States and school districts improve mathematics and science education.

A. Rick Davis, Program Director
Pacific Mathematics and Science Regional
Consortium
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599
email: davisr@prel-oahu-1.prel.hawaii.edu

DEPARTMENT OF LABOR (DOL)

Job Training Partnership Act Liaison
The Job Training Partnership Act Liaison can provide information about the Job Training Partnership Act (JTPA) State and local programs for economically disadvantaged adults and youth.

Kohne K. Ramon, Acting Director
Office of Administrative Service
Government of the Federated States
of Micronesia
P.O. Box 490
Kolonia, Pohnpei, FM 96941
(691) 320–2618/Fax: (691) 320–5854

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA CORE
NASA's Central Operation of Resources for Educators (CORE) was established for the national and international distribution of NASA-produced educational materials in audiovisual format. Submit a written request on your school letterhead for a catalog and order forms. Orders

are processed for a small fee that includes the cost of the media.

NASA CORE
Lorain County Joint Vocational School
15181 Route 58 South
Oberlin, OH 44074
(216) 744–1051, Ext. 293 or 294

GUAM

DEPARTMENT OF AGRICULTURE (USDA)

Ag in the Classroom State Leader
Ag in the Classroom promotes increased understanding of agriculture and possible careers in the agricultural sciences. With national leadership provided by the U.S. Department of Agriculture, each State manages its own programs, in conjunction with assistance from agribusiness, educational institutions, and government.

Victor Artero
College of Agriculture and Life Sciences
University of Guam
Mangilao, GU 96923
(671) 734–2575/Fax: (671) 734–6842

4–H State Leader
The State 4–H Youth Development Programs are administered by the Cooperative Extension Service of land-grant universities and colleges. The State 4–H leaders coordinate outreach services and training to all county offices.

Dr. Theodore M. Iyechad, 4–H Program Leader
College of Agriculture and Life Sciences
CES, 4–H, and Youth
University of Guam
Mangilao, GU 96923
(671) 734–4753

DEPARTMENT OF DEFENSE

U.S. Naval Forces Marianas, Guam
The U.S. Naval Forces Marianas in Guam participate in the Navy Community Service Program through the formation of partnerships with schools and other youth organizations in the area.

COMNAVMARIANAS GQ
Commander
U.S. Naval Forces Marianas
PSC 489, Box 28
FPO AP 96205–0051
(671) 349–5212

DEPARTMENT OF EDUCATION (ED)

Pacific Region Educational Laboratory (PREL)
The Regional Educational Laboratory identifies effective teaching techniques and school improvement efforts within the region and shares this information with State and local educators.

John W. Kofel, Executive Director
Pacific Region Educational Laboratory
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599

Pacific Mathematics and Science Regional Consortium
The Eisenhower Regional Consortium provides information and technical assistance to help States and school districts improve mathematics and science education.

A. Rick Davis, Program Director
Pacific Mathematics and Science Regional Consortium
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599
email: davisr@prel-oahu-1.prel.hawaii.edu

National Diffusion Network (NDN) Facilitator
The National Diffusion Network Facilitator promotes the transfer of successful programs by identifying suitable NDN programs and assists with training and installation.

Margaret Camacho, NDN Facilitator
Federal Program Office
Guam Department of Education
P.O. Box DE
Agana, GU 96910
(671) 472–8524/5004/Fax: (671) 477–4587
(202) 225–1188 (Washington, D.C., office)
email: mcamacho@inet.ed.gov

DEPARTMENT OF LABOR (DOL)

Job Training Partnership Act Liaison
The Job Training Partnership Act Liaison can provide information about the Job Training Partnership Act (JTPA) State and local programs for economically disadvantaged adults and youth.

Peter S. Calvo, Director
Agency for Human Resources Development
P.O. Box CP
Agana, GU 96910
(671) 646–9341/Fax: (671) 646–9339

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA Regional Office
The regional office takes part in a variety of environmental education programs for both teachers and students. Programs range from teacher workshops and student contests to in-school presentations. Information on environmental issues is also available through the Public Information Center located at the regional office.

Environmental Education Coordinator
Environmental Protection Agency
75 Hawthorne Street, Mail Stop E2
San Francisco, CA 94105
(415) 744–1581/Fax: (415) 744–1605

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA CORE
NASA's Central Operation of Resources for Educators (CORE) was established for the national and international distribution of NASA-produced educational materials in audiovisual format. Submit a written request on your school letterhead for a catalog and order forms. Orders are processed for a small fee that includes the cost of the media.

NASA CORE
Lorain County Joint Vocational School
15181 Route 58 South
Oberlin, OH 44074
(216) 744–1051, Ext. 293 or 294

HAWAII

DEPARTMENT OF AGRICULTURE (USDA)

Ag in the Classroom State Leader
Ag in the Classroom promotes increased understanding of agriculture and possible careers in the agricultural sciences. With national leadership provided by the U.S. Department of Agriculture, each State manages its own programs, in conjunction with assistance from agribusiness, educational institutions, and government.

Ken Kajihara
Department of Education
49 Funchal Street, J–306
Honolulu, HI 96813–1549
(808) 373–3477

4–H State Leader
The State 4–H Youth Development Programs are administered by the Cooperative Extension Service of land-grant universities and colleges. The State 4–H leaders coordinate outreach services and training to all county offices.

Gary W. Gerhard, Program Leader
4–H Youth Development
University of Hawaii at Manoa
3050 Maile Way
Honolulu, HI 96822
(808) 956–8327

DEPARTMENT OF COMMERCE (DOC)

Hawaiian Islands Humpback Whale National Marine Sanctuary
Hawaiian Islands Humpback Whale National Marine Sanctuary was congressionally designated in November 1992. A Sanctuary Management Plan that includes an education and interpretation section is under development. Current educational activities available to visitors and residents highlight the humpback whale and Hawaii's unique marine environment.

Janice Sessing
Hawaiian Islands Humpback Whale National
  Marine Sanctuary
300 Ala Moana Boulevard
Room 5350
P.O. Box 50186
Honolulu, HI 96850
(808) 541–3184/Fax: (808) 541–3450
(800) 831–4888 (Neighbor Islands)

Allen Tom
Hawaiian Islands Humpback Whale National Marine Sanctuary (Maui)
726 South Kihei Road
Kihei, HI 96753
(808) 879–2818/Fax: (808) 874–3815

Waimanu Valley National Estuarine Research Reserve
Limited educational activities are offered at Waimanu Valley, which is accessible only by a rigorous 7.5 mile trail.

Education Coordinator
Waimanu Valley National Estuarine Research Reserve
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street
Hilo, HI 96813
(808) 587–0054/Fax: (808) 587–0060

DEPARTMENT OF DEFENSE (DOD)

Naval Base, Pearl Harbor
The Naval Base at Pearl Harbor participates in the Navy Community Service Program through the formation of partnerships with schools and youth organizations in the area.

COMNAV, Pearl Harbor, HI
Commander, Naval Base
Code NQOL3
Pearl Harbor, HI 96860–5350
(808) 474–1181

DEPARTMENT OF EDUCATION (ED)

Pacific Region Educational Laboratory (PREL)
The Regional Educational Laboratory identifies effective teaching techniques and school improvement efforts within the region and shares this information with State and local educators.

John W. Kofel, Executive Director
Pacific Region Educational Laboratory
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599

Pacific Mathematics and Science Regional Consortium
The Eisenhower Regional Consortium provides information and technical assistance to help States and school districts improve mathematics and science education.

A. Rick Davis, Program Director
Pacific Mathematics and Science Regional Consortium
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599
email: davisr@prel-oahu-1.prel.hawaii.edu

Eisenhower State Education Coordinators
Eisenhower State Education Coordinators oversee the Eisenhower Mathematics and Science Education Program State Formula Grants for the State Education Agency (SEA) and the State Agency for Higher Education (SAHE). The program focuses on teacher enhancement through both inservice and preservice programs.

SEA
Kathleen Nishimura
Justin Mew
Eisenhower Mathematics and Science Program
189 Lunalilo Home Road, Second Floor
P.O. Box 2360
Honolulu, HI 96825
(808) 396–2567/Fax: (808) 548–5390

SAHE
Dr. Phillip Whitesell
Eisenhower Mathematics and Science Program
University of Hawaii, College of Education
1776 University Avenue
Honolulu, HI 96825
(808) 956–7704

National Diffusion Network (NDN) Facilitator
The National Diffusion Network Facilitator promotes the transfer of successful programs by identifying suitable NDN programs and assists with training and installation.

Dr. Mona Vierra, State Facilitator
Department of Education
Office of Information and Telecommunication Services
P.O. Box 2360
Honolulu, HI 96808
(808) 735–3107/Fax: (808) 733–9147
email: mvierra@inet.ed.gov

DEPARTMENT OF THE INTERIOR (DOI)

Haleakala National Park

Guided, environmental field trips for school groups are the primary activities offered at Haleakala National Park. Teacher guides and previsit materials are provided for field trip participants.

Division of Interpretation
P.O. Box 369
Makawao, Maui, HI 96768
(808) 572–9306

Hawaii Volcanoes National Park

The Hawaii Volcanoes National Park offers nature and orientation walks to inform students about the geological mechanics of volcanoes.

Division of Interpretation
Hawaii Volcanoes National Park
P.O. Box 52
Hawaii Volcanoes National Park, HI 67918
(808) 967–7311

Kaloko-Honokohau National Historical Park

Kaloko-Honokohau National Historical Park offers guided walks and activities to educate students about the geology, anthropology, biology, and history within the Park.

Division of Interpretation
Kaloko-Honokohau National Historical Park
73–4786 Kanalani Street, #14
Kailua-Kona, HI 96740
(808) 329–6881/Fax: (808) 828–6634

Kaui National Wildlife Refuge Complex

Guided tours and teacher guides that focus on environmental education are available upon request at the Kaui National Wildlife Refuge Complex.

Public Use Manager
Kaui National Wildlife Refuge Complex
P.O. Box 87, Kilauea
Kauai, HI 96740
(808) 828–1413/Fax: (808) 828–6634

Project WILD

Project WILD offers teacher training and educational materials. Teacher guides, which contain more than 80 supplementary, interdisciplinary activities for grades K–12, are free to teachers who attend the training session.

Randy Honebrink, Project WILD Coordinator
Hawaii Division of Aquatic Resources
1151 Punchbowl Street
Honolulu, HI 96813
(808) 587–0111/Fax: (808) 587–0115

Colleen Murakami
Department of Education
189 Lunalilo Home Road
Honolulu, HI 96825
(808) 396–2572/Fax: (808) 548–5390

DEPARTMENT OF LABOR (DOL)

Job Training Partnership Act Liaison

The Job Training Partnership Act Liaison can provide information about the Job Training Partnership Act (JTPA) State and local programs for economically disadvantaged adults and youth.

Dayton Nakanelua, Director
Hawaii Department of Labor and Industrial Relations
830 Punchbowl Street, Room 320
Honolulu, HI 96813
(808) 586–8844/Fax: (808) 586–9099

DEPARTMENT OF TRANSPORTATION (DOT)

Federal Aviation Administration (FAA) Aviation Education Representative

The Federal Aviation Administration Aviation Education Representative coordinates aviation education services, including materials and programs for the FAA in the States assigned to the region.

FAA Aviation Education Representative
Hank Verbais, AWP–5
P.O. Box 92007, Worldway Postal Center
Los Angeles, CA 90009
(310) 297–1431/Fax: (310) 297–0125

Federal Aviation Administration (FAA) Aviation Education Resource Centers

As a partner with the Federal Aviation Administration, the Aviation Resource Centers provide a local source for aviation education materials and programs.

Aviation Education Resource Center
Mid-Pacific Institute
Attention: Dr. Phillip R. Brieske
Aviation/Space Science
2445 Kaala Street
Honolulu, HI 96822
(808) 973–5000

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA Regional Office

The regional office takes part in a variety of environmental education programs for both teachers and students. Programs range from teacher workshops and student contests to in-school presentations. Information on environmental issues is also available through the Public Information Center located at the regional office.

Environmental Education Coordinator
Environmental Protection Agency
75 Hawthorne Street, Mail Stop E2
San Francisco, CA 94105
(415) 744–1581/Fax: (415) 744–1605

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA Field Center

Each NASA Field Center has an educational programs officer who is responsible for precollege education programs. In addition to administering national programs, the NASA Field Center offers programs and services to meet regional and local needs.

Garth A. Hull
Chief, Educational Programs Branch
NASA Ames Research Center
Mail Stop 204–12
Moffett Field, CA 94035–1000
(415) 604–5543

NASA Teacher Resource Center

The Teacher Resource Center has a variety of NASA-related educational materials in various formats, including videotapes, slides, audiotapes, publications, and teacher guides. Teachers may preview or copy NASA materials upon request.

NASA Ames Research Center
Teacher Resource Center
Mail Stop T12–A
Moffett Field, CA 94035–1000
(415) 604–3574

NASA Regional Teacher Resource Center

To provide more opportunities for educators to visit Teacher Resource Centers, NASA forms partnerships with various institutions that serve as Regional Teacher Resource Centers. Teachers may preview or copy NASA materials at these Regional Teacher Resource Centers.

Barbers Point Elementary School
NASA Regional Teacher Resource Center
Boxer Road
Barbers Point Naval Air Station
Ewa Beach, HI 96706
(808) 682–0622

Hawaii Space Grant Consortium

The Space Grant Consortium in each State consists of colleges, universities, industry, and other organizations that have an interest in aeronautics and space education. Each consortium receives NASA funds for use in implementing a balanced program of research, education, and public service.

Hawaii Space Grant Consortium
School of Ocean and Earth
Science and Technology
2525 Correa Road
University of Hawaii at Manoa
Honolulu, HI 96822
(808) 956–3147

REPUBLIC OF THE MARSHALL ISLANDS

DEPARTMENT OF EDUCATION (ED)

Pacific Region Educational Laboratory (PREL)

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John W. Kofel, Executive Director
Pacific Region Educational Laboratory
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599

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A. Rick Davis, Program Director
Pacific Mathematics and Science Regional Consortium
828 Fort Street Mall, Suite 500
Honolulu, HI 96813
(808) 533–6000/Fax: (808) 533–7599
email: davisr@prel-oahu-1.prel.hawaii.edu

DEPARTMENT OF LABOR (DOL)

Job Training Partnership Act Liaison
The Job Training Partnership Act Liaison can provide information about the Job Training Partnership Act (JTPA) State and local programs for economically disadvantaged adults and youth.

Antonio Eliu
Minister of Social Services
P.O. Box 1138
Majuro, Republic of the Marshall Islands 96960
(692) 625–3345

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA CORE
NASA's Central Operation of Resources for Educators (CORE) was established for the national and international distribution of NASA-produced educational materials in audiovisual format. Submit a written request on your school letterhead for a catalog and order forms. Orders are processed for a small fee that includes the cost of the media.

NASA CORE
Lorain County Joint Vocational School
15181 Route 58 South
Oberlin, OH 44074
(216) 744–1051, Ext. 293 or 294

REPUBLIC OF PALAU

DEPARTMENT OF EDUCATION (ED)

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John W. Kofel, Executive Director
Pacific Region Educational Laboratory
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Honolulu, HI 96813
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email: davisr@prel-oahu-1.prel.hawaii.edu

National Diffusion Network (NDN) Facilitator
The National Diffusion Network Facilitator promotes the transfer of successful programs by identifying suitable NDN programs and assists with training and installation.

Masa-aki Emesiochl, State Facilitator
Department of Education
P.O. Box 1346
Koror, Republic of Palau 96940
(680) 488–1003/Fax: (680) 488–2830
email: memesioc@inet.ed.gov

DEPARTMENT OF LABOR (DOL)

Job Training Partnership Act Liaison
The Job Training Partnership Act Liaison can provide information about the Job Training Partnership Act (JTPA) State and local programs for economically disadvantaged adults and youth.

Keral Mariur, Executive Director
Private Industry Council (SJTCC)
P.O. Box 100
Koror, Republic of Palau 96940
(680) 488–2513/Fax: (680) 488–1725

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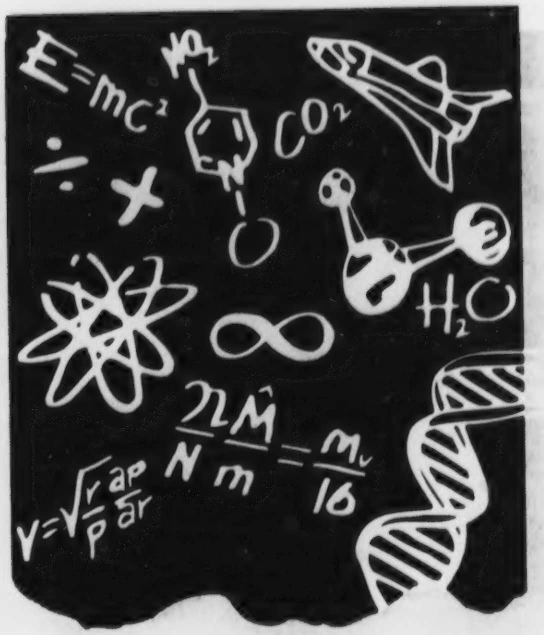
(216) 744–1051, Ext. 293 or 294



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